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CRA

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December 22, 1997

Reference No. 6029-50

Mr. Regan S. Williams
State Project Coordinator
Ohio EPA - Division of
Emergency & Remedial Response
2110 East Aurora Road
Twinsburg, Ohio 44087

Dear Mr. Williams:

Re: Hydraulic Monitoring and
Seventh Round of Groundwater Quality Monitoring
Summit National Superfund Site
Deerfield, Ohio

In accordance with the Consent Decree and Statement of Work (SOW) requirements for the Summit National Superfund Site (Site) in Deerfield, Ohio, the Summit National Facility Trust (SNFT) herewith submits two copies of the October 1997 groundwater hydraulic monitoring data and the seventh round of groundwater analytical results, as required by the groundwater monitoring program for the Site. The seventh round of groundwater sampling was conducted during the period of October 6 to 10, 1997.

A. Groundwater Quality Monitoring

As required by the SOW, the seventh round of groundwater sampling included sampling of the water table unit (WTU), upper intermediate unit (UIU), lower intermediate unit (LIU), Upper Sharon Unit (USU), and residential wells. Consistent with the September 13, 1996 letter to the United States Environmental Protection Agency (USEPA) and the Ohio Environmental Protection Agency (OEPA), the samples collected during this seventh round of groundwater quality monitoring were analyzed by Accutest of Dayton, New Jersey for the Site-Specific Indicator Parameter List (SSIPL) parameters included on Table 1.

Attachment A is a memorandum summarizing the groundwater quality monitoring field activities for the seventh round of the groundwater quality monitoring program. Attachment B presents the SSIPL analytical results for the groundwater samples collected during the seventh round of groundwater sampling at the Site, as follows:

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<i>Table in Attachment B</i>	<i>Analytical Results</i>
Table 1	SSIPL VOC's and metals for all monitoring wells
Table 2	SSIPL SVOC's for select monitoring wells
Table 3	SSIPL VOC's, SVOC's, and metals for residential wells
Table 4	Rinsate blanks
Table 5	Trip blanks

CRA's data quality assurance evaluation for the seventh round of groundwater analyses is included in Attachment C. All the analytical data were found to exhibit acceptable levels of accuracy and precision and were used with the qualifications noted in Attachment C.

Monitoring Well SSIPL VOC's and Metals

A summary of the SSIPL VOC and metal compounds detected for each monitoring well for the seven rounds of groundwater sampling conducted at the Site since November 1994 are presented on attached Plans WTU, LIU, UIU, and USU.

In the WTU, the only significant changes in the groundwater chemistry occurred in on-Site monitoring wells MW-108, MW-11, and MW-107, and in off-Site monitoring well MW-118. At MW-108, the concentration of 1,2-Dichloroethene (1,2-DCE) (total) reduced to non-detect. At MW-11, the concentrations of 1,1-Dichloroethane (1,1-DCA), 1,2-Dichloroethane (1,2-DCA), and 1,2-DCE reduced to non-detect, and the concentrations of the SSIPL metals (cadmium, lead, and nickel) increased. At MW-107, the concentration of 1,1-DCA reduced to non-detect, and the concentrations of the other detected SSIPL compounds decreased, except for 1,2-DCA. The reducing concentrations of the SSIPL compounds at MW-107 could be representative of the migrating contaminant plume towards the pipe and media drain. At MW-118 (to the south-east of the Site and hydraulically downgradient from the Site), 1,2-DCA was detected at a concentration of 3.3 µg/L. However, 1,2-DCA has not been detected at MW-115 or MW-113, which are located between the Site and MW-118.

No significant changes in the groundwater chemistry in the UIU, LIU, and USU are apparent.

Prior to sampling of the LIU and USU wells, MW-322, MW-324, and MW-420 were re-developed, as detailed in the field memorandum presented in Attachment A, in an attempt to reduce the pH of the groundwater samples, and to obtain representative

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samples of groundwater from these wells. The pH of the groundwater in MW-322 and MW-324 was reduced to 8.9 and 8.9, respectively, during the redevelopment process, while the pH of the groundwater in MW-420 could only be reduced to 11.9. It is proposed to repeat the well development of MW-322 and MW-324 prior to commencing the next round of groundwater sampling. As MW-420 is not hydraulically downgradient from the Site, consistent with CRA's June 13, 1995 letter to USEPA and OEPA, it is proposed to use MW-420 for groundwater hydraulic monitoring only.

Monitoring Well SSIPL SVOC's

Only the groundwater sample from on-Site monitoring well MW-107 exhibited detectable concentrations of the SSIPL SVOC's. All of the SSIPL SVOC's concentrations indicate a decreasing trend at MW-107.

Residential Well SSIPL VOC's, SVOC's, and Metals

Only the Martin residential well sample had detectable concentrations of SSIPL VOC's (ethylbenzene at 1.1 µg/L, toluene at 2.2 µg/L, and xylenes at 4.8 µg/L). These concentrations are well below the federal and state drinking water standards.

Both the Duley and Martin residential well samples had detectable concentrations of lead at 4.8 and 4.4 µg/L, respectively. These lead concentrations are well below the USEPA action level of 15 µg/L for lead.

No SSIPL SVOC's were detected in the residential well samples.

B. Groundwater Hydraulic Monitoring

Groundwater levels at the Site were measured on October 6, 1997, and are presented in Attachment D. The groundwater hydraulic data were reduced to elevations and entered into a computer database as required by the SOW. Groundwater contours for the WTU, UIU, LIU, and the USU for the October 1997 monitoring event are presented on figures in Attachment E. Groundwater hydrographs for the period of November 1994 to October 1997 for each of the wells and piezometers used for hydraulic monitoring are included in Attachment D.

The groundwater elevation contours included in Attachment E were prepared incorporating an exponential variogram and a linear drift function with the Kriging interpolation method (as implemented in SURFER for Windows, Golden Software, Inc., Golden, Colorado, 1995).

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Review of the groundwater elevation data for the Site allows the following observations and conclusions to be made regarding the groundwater flow system in the vicinity of the Site:

1. the groundwater elevation contours for the WTU demonstrate that the operation of the pipe and media drain system is maintaining hydraulic containment of the on-Site portion of the WTU. Hydraulic containment of significant portions of the WTU to the north, west, and south of the Site also is being achieved by the pipe and media drain operation;
2. the horizontal direction of groundwater flow is generally southeasterly in the WTU as has been consistently observed in the past. The groundwater flow direction in all the bedrock units (i.e. UIU, LIU, and USU) appears to be in a generally easterly direction. The on-Site potable water well groundwater elevation is not considered to be representative of the groundwater flow patterns; and
3. the surcharging of the pipe and media drain as evidenced by the water levels in the manholes being higher than the perforated pipe invert elevations at the manholes, is due to a temporary shutdown of the groundwater extraction system prior to the seventh round of groundwater monitoring conducted at the Site. However, the October 6, 1997 groundwater level measurements indicate that the pipe and media drain at the Site is providing containment of the groundwater at the Site boundary.

In accordance with the effectiveness monitoring program for the Site, groundwater hydraulic monitoring will continue on a quarterly basis, and the groundwater quality monitoring will continue on a biannual basis.

SNFT trusts this letter report is sufficient for the groundwater effectiveness monitoring requirements as required by the SOW for the Site. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES



Steve Whillier, P. Eng.

SW/dm/8

CONESTOGA-ROVERS & ASSOCIATES

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Encl.

c.c.: Anthony Rutter (USEPA)
Richard McAvoy (Black & Veatch)
Mark Whitmore (SNFT)
Patrick Steerman (SNFT)
Kenneth Walanski (SNFT)
Douglas Haynam (SNFT)
Jack Michels (CRA)
Richard Murphy (CRA)
Mark Witherspoon (Site Operator)

TABLE 1

**OCTOBER 1997 GROUNDWATER
MONITORING/ANALYTICAL SCHEDULE
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

<u>Site-Specific Indicator Parameter List</u>	<u>Monitoring Wells ⁽¹⁾</u>
A. Volatile Organic Compounds (VOCs)	All WTU, UIU, LIU, USU, and Residential Wells ⁽²⁾
1,1-Dichloroethane	
1,2-Dichloroethane	
1,2-Dichloroethene, Total	
2-Butanone (Methyl Ethyl Ketone)	
Acetone	
Ethylbenzene	
Toluene	
Trichloroethene	
Xylenes, Total	
B. Inorganic Compounds	All WTU, UIU, LIU, USU, and Residential Wells ⁽²⁾
Cadmium, Total	
Lead, Total	
Nickel, Total	
C. Semi-Volatile Organic Compounds (SVOCs)	
Phenol	WTU: MW-11, MW-102, MW-103
2-Methylphenol	MW-107, MW-108, MW-110
4-Methylphenol	MW-115
2,4-Dimethylphenol	UIU: MW-202, MW-204, MW-205
Isophorone	MW-207, MW-209

Notes:

(1) Per CRA September 13, 1996 letter to USEPA and OEPA.

(2) WTU = Water Table Unit

UIU = Upper Intermediate Unit

LIU = Lower Intermediate Unit

USU = Upper Sharon Unit

A

ATTACHMENT A

GROUNDWATER SAMPLING MEMORANDUM

CRA

MEMO

2055 Niagara Falls Boulevard
Suite Three -
Niagara Falls, New York 14304
(716) 297-6150
(716) 297-2265 Telecopier

TO: Stephen Whillier/Mike Mateyk REFERENCE NO.: 6029-50
FROM: David Tyran/ms/3 DATE: October 17, 1997
RE: Seventh Round of Groundwater Sampling
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
CC: Jack Michels, James Varnava

The following is a brief summary of the Site activities associated with the seventh round of groundwater sampling conducted from October 6 to October 10, 1997 at the Summit National Superfund Site (Site) in Deerfield Township of Portage County, Ohio.

On-Site Personnel

Field activities were conducted by Conestoga-Rovers & Associates (CRA's) James Varnava and TreaTek-CRA's David Tyran. Mark Witherspoon of TreaTek-CRA was on Site for treatment plant operations.

Water Levels

A complete round of water level readings were taken from all on-Site and off-Site monitoring wells and collection manholes on October 6, 1997 using a Solinst electronic water level tape. The water level tape was decontaminated between water level measurements at each monitoring well. The decontamination sequence involved first rinsing the tape with potable water, and final rinsing with deionized water. A water level reading was also taken from the potable water supply well just north of the treatment plant. Well depths were also sounded using the same water level tape.

Purging and Sampling of Monitoring Wells

During purging of all monitoring wells, readings of pH, specific conductivity, temperature and turbidity (dependent on field observations) were taken after the removal of each standing well volume. A summary of the well development data is provided in Table 1. The quality of the evacuated water was also noted for color and

clarity. All purge waters (approximately 1,015 gallons) from the monitoring wells were containerized and treated at the on-Site treatment plant.

Once the monitoring wells were purged, groundwater samples were collected for analyses of the Site-specific Indicator Parameter List (SSIPL) of select volatile organic compounds (VOCs) and metals (unfiltered). In addition, 12 monitoring wells and three residential wells were also sampled for SSIPL semi-volatile organic compounds (SVOCs).

Monitoring wells that were purged using dedicated Waterra foot valves and tubing were sampled using a precleaned stainless-steel bailer. Once purging of the monitoring well was completed, the tubing was removed from the well and the water was drained into a carboy. The standing water within the well was allowed to settle so that a clear sample could be collected. After sampling of the well was completed, the tubing was placed back down the well.

The Lower Intermediate Unit (LIU) and Upper Sharon Unit (USU) monitoring wells were purged using a precleaned 2-inch diameter Grundfos pump with dedicated tubing. Once purging of the monitoring well was completed, the pump and tubing were removed from the well and the water was drained into a carboy. Sampling was completed using a pre-cleaned stainless steel bailer after allowing the standing water within the well to settle. After sampling of the well was completed, the tubing was placed back down the well.

Collected samples were labeled and placed in a cooler and maintained cool with ice. The samples were shipped daily by Federal Express to Accutest Laboratories in Dayton, New Jersey under chain of custody (COC) protocols. Copies of the COCs are provided in Attachment A.

Decontamination Procedures

Stainless-steel bailers were cleaned between monitoring wells by using the following decontamination sequence:

- i) clean with brush in potable water and alconox detergent;
- ii) rinse thoroughly with potable water;
- iii) rinse thoroughly with deionized water; and
- iv) allow the bailer to air dry on clean aluminum foil.

Once the bailers were allowed to air dry thoroughly, they were wrapped in aluminum foil prior to use at each monitoring well.

The Grundfos pump was cleaned between monitoring wells by using the following decontamination sequence:

- i) run pump in a pail filled with potable water and alconox (pump discharge water back into pail);
- ii) run pump in a pail filled with potable water (pump discharge water back into pail);
- iii) rinse pump with deionized water; and
- iv) wipe pump with clean paper towel and wrap in aluminum foil.

Water Table Unit (WTU) Monitoring Well Sampling

All of the WTU monitoring wells, except MW4, MW101, MW102, MW103, MW104, MW106, MW115, and MW116 were purged using dedicated Waterra foot valves and tubing. Monitoring wells MW101, MW102, MW103, MW104, MW106, MW115, and MW116 were purged using a precleaned stainless steel bailer. Monitoring well MW4 was purged using a precleaned 2-inch diameter Grundfos pump.

As shown in Table 1, nine out of the 19 WTU monitoring wells were purged dry. All dry wells except MW11 recovered sufficiently for complete sample sets to be taken. Only SSIPL VOCs and a partial metals sample could be collected from this well.

Upper Intermediate Unit (UIU) Monitoring Well Sampling

All of the UIU monitoring wells were purged using dedicated Waterra foot valves and tubing. As shown in Table 1, eight of the 12 UIU monitoring wells went dry before reaching stabilization. All eight wells recovered sufficiently for complete sample sets to be taken.

Lower Intermediate Unit (LIU) Monitoring Well Sampling

The LIU monitoring wells were purged using either a precleaned 2-inch diameter Grundfos pump with dedicated tubing or dedicated Waterra foot valve and tubing. As shown in Table 1, only monitoring wells MW301, MW305, and MW306 had sufficient recharge to allow stabilization by purging three or more volumes. The remaining 11 wells were purged dry.

Upper Sharon Unit (USU) Monitoring Well Sampling

All seven USU monitoring wells were purged using a precleaned 2-inch diameter Grundfos pump with dedicated tubing. With the exception of monitoring well MW421 all wells were purged dry. The dry wells recovered sufficiently for complete sample sets to be taken.

Field QA/QC Program

Field QA/QC samples collected during the seventh round of groundwater sampling included a total of six blind field duplicates, six stainless-steel bailer rinsate blanks. Two matrix spike and matrix spike duplicates (MS/MSDs) were also collected. One trip blank was sent with each shipment of samples to the laboratory by placing all VOC samples in the same cooler with the trip blank. A sample key is provided in Table 2.

Stainless-steel bailer rinsate blanks were collected by pouring lab-supplied deionized water into a precleaned bailer and then filling the sample containers.

Monitoring Well Redevelopment

In addition to the sampling activities completed this round three monitoring wells with historically high pH readings were redeveloped. Monitoring wells MW322, MW324, and MW420 were purged to dryness in the morning and evening for five consecutive days (October 6 through October 10, 1997). Table 3 contains a summary of the redevelopment volumes and pH readings. Groundwater samples were taken after the completion of the redevelopment.

Residential Well Sampling

Three residential wells were sampled this round for SSIPL VOCs, SVOCs, and metals (unfiltered). Samples were collected from Ms. Kathy Martin located directly east and adjacent to the Site, Mr. and Mrs. Duley just east of Ms. Martin and Mr. and Mrs. Carver who live on the north side of Route 224, one half mile east of the Site.

Sampling consisted of a 15 minute purge from an outdoor spigot (Carver's spigot located in basement) then filling the sample bottles directly from the spigot. All three sample locations were located before any water softeners or treatment systems and as close to the wellhead as possible.

TABLE 1
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW4	10/09/97	8.8	8.8	0900	2,560	6.33	13.8	189	Cloudy, brown, silty	Grundfos Pump/SS bailer for all parameters	Dry after 8.8 gallons
	10/09/97		Sample	1400							
MW11	10/10/97	0.2	0.2	1042	3,090	6.48	13.6	505	Cloudy, light gray	Waterra/teflon bailer for all parameters	Dry after 0.2 gallons
	10/10/97		Sample	1300					Cloudy, dark gray		
MW101	10/07/97	2.2	2.2	1357	2,230	5.66	14.4	460	Light brown, cloudy	SS bailer/SS bailer for all parameters	Dry after two volumes
			4.4	1410	2,300	5.64	14.2	685	Light brown, cloudy		
	10/07/97		Sample	1715					Clear, colorless		
MW102	10/07/97	2.0	2.0	1448	2,150	4.40	14.1	30	Silky, dark brown	SS bailer/SS bailer for all parameters	Good recharge
			4.0	1459	1,770	4.29	13.8	680	Gray, very turbid		
			6.0	1504	1,740	4.29	14.8	640	Gray, very turbid		
	10/07/97		8.0	1507	1,790	4.23	13.7	345	Gray, very turbid		
			Sample	1745					Clear, colorless		
MW103	10/09/97	2.5	2.5	1142	1,660	6.06	15.5	496	Clear, colorless	SS bailer/SS bailer for all parameters	Good recharge
			5.0	1145	1,600	6.15	14.8	521	Dark gray, cloudy, silty		
			7.5	1148	1,560	6.15	14.6	309	Cloudy, gray		
	10/09/97		Sample	1415					Cloudy, gray		
MW104	10/09/97	0.9	0.9	1158	1,970	5.90	13.0	458	Cloudy, light brown	SS Bailier/SS bailer for all parameters	Good recharge
			1.8	1201	2,050	5.86	12.6	500	Cloudy, light brown		
			2.7	1205	2,020	5.92	12.7	562	Cloudy, dark gray		
	10/09/97		Sample	1430					Clear, colorless		
MW105	10/09/97	0.5	0.5	1208	3,000	5.32	14.2	425	Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
			1.0	1210	2,970	5.35	13.0	105	Cloudy, light gray		
			1.5	1212	3,010	5.33	14.2	NM	Cloudy, light gray		
	10/09/97		Sample	1500					Clear, colorless		
MW106	10/09/97	1.4	1.4	1220	2,720	5.63	13.8	447	Silky, cloudy, light gray	SS Bailier/SS bailer for all parameters	Good recharge
			2.8	1225	2,680	5.56	13.3	427	Silky, cloudy, light gray		
			4.2	1230	2,680	5.60	12.5	355	Silky, cloudy, dark gray		
	10/09/97		Sample	1515					Cloudy		
MW107	10/10/97	1.6	1.6	1135	3,130	6.53	12.8	28.2	Clear, gray tint slight chemical odor	Waterra/SS bailer for all parameters	Good recharge
			3.2	1138	3,200	6.58	12.8	16	Clear, gray tint slight chemical odor		
			4.8	1145	3,180	6.62	13.3	12.2	Clear, gray tint slight chemical odor		
	10/10/97		Sample	1430					Clear, gray tint slight chemical odor		

TABLE 1
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW108	10/10/97	0.4	0.4	0945	3,440	6.33	13.2	212	Cloudy, light brown	Waterra/SS bailer for all parameters	Dry after 1.1 gallons
			0.8	0946	3,430	6.48	13.4	136	Cloudy, light brown		
	10/10/97		Sample	1445					cloudy, light brown		
MW109	10/06/97	0.6	0.6	1518	2,100	5.76	16.5	276	Gray, silty	Waterra/SS bailer for all parameters	Dry after 1.8 gallons
			1.2	1520	2,000	5.94	16.5	339	Gray, silty		
			1.8	1522	2,190	6.43	17.5	>1000	Gray, silty		
	10/06/97		Sample	1815					Cloudy, dark gray, silty		
MW110	10/06/97	0.6	0.6	1615	940	6.59	13.8	76	Clear, colorless	Waterra/SS bailer for all parameters	Dry after 1.7 gallons
			1.2	1617	760	6.78	14.6	138	Cloudy, light gray		
	10/06/97		Sample	2045					Slightly cloudy, light brown		
MW111	10/09/97	0.4	0.4	1232	2,640	5.65	13.6	331	Gray, silty	Waterra/SS bailer for all parameters	Good recharge
			0.8	1233	2,660	5.63	13.0	596	Brown, silty		
			1.2	1234	2,630	5.85	15.3	224	Brown, silty		
	10/09/97		Sample	1530					Cloudy, light brown		
MW113	10/09/97	0.5	0.5	1720	2,980	6.24	14.9	895	Gray, turbid	Waterra/SS bailer	Dry after 0.9 gallons
	10/09/97		Sample	2000					Very cloudy, brown, silty		
MW114	10/09/97	0.6	0.6	1130	2,390	4.38	15.8	>1000	Cloudy, dark red-brown	Waterra/SS bailer	Dry after 1.0 gallons
	10/09/97		Sample	1545					Clear, colorless		
MW115	10/09/97	2.2	2.2	1114	1,870	6.13	12.9	54	Slightly cloudy, light gray	SS bailer/SS bailer for all parameters	Good recharge
			4.4	1116	1,850	6.10	12.7	53	Clear, colorless		
			6.6	1118	1,890	6.08	12.6	50	Clear, colorless		
	10/09/97		Sample	1600					Clear, colorless		
MW116	10/07/97	0.13	0.13	0900	3,700	6.77	13.1	649	Cloudy, light brown, silty	SS bailer/SS bailer for all parameters	Minimal volume in well
	10/07/97		Sample	1100					Cloudy, light brown, silty		
MW117	10/07/97	1.6	1.6	0916	2,730	5.83	12.2	269	Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
			3.2	0918	2,760	5.80	12.2	262	Gray, cloudy		
			4.8	0920	2,740	5.79	12.5	235	Cloudy, gray		
	10/07/97		Sample	1115					Clear, colorless		
MW118	10/06/97	1.4	1.4	1500	1,890	6.22	13.6	300	Silty, cloudy, light brown	Waterra/SS bailer for all parameters	Good recharge
			2.8	1502	1,900	6.39	14.1	520	Gray, silty		
			4.2	1504	1,860	6.43	12.3	582	Gray, silty		
	10/06/97		Sample	1800					Cloudy, light gray		

TABLE 1
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW201	10/07/97	7.9	7.9	1405	3,310	7.10	13.3	538	Clear, colorless	Waterra/SS bailer for all parameters	Dry after 16.0 gallons
	10/07/97		15.8	1410	3,420	7.07	13.6	102	Slightly cloudy, light gray		
MW202			Sample	1730					Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
	10/07/97	3.4	3.4	1435	1,620	8.13	13.5	49.6	Clear, colorless		
			6.8	1445	1,760	8.14	13.2	108	Gray, cloudy		
MW203			10.2	1452	1,900	7.92	12.5	182	Gray, cloudy	Waterra/SS bailer for all parameters	Purged dry after two volumes, slow recharge
	10/07/97		Sample	1815					Clear, colorless		
	10/07/97	6.4	6.4	1537	2,820	8.56	14.1	130	Clear, colorless		
MW204			12.8	1549	3,400	8.48	14.5	117	Clear, colorless	Waterra/SS bailer for all parameters	Dry after 11.5 gallons
	10/07/97		Sample	1845					Clear, colorless		
	10/07/97	5.2	5.2	1330	2,730	6.74	12.5	26	Clear, colorless		
MW205			10.4	1338	2,670	6.66	13.8	70.3	Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
	10/07/97		Sample	1700					Clear, colorless		
	10/07/97	4.3	4.3	0949	2,910	5.64	13.9	10.8	Clear, colorless		
MW206			8.6	0954	2,860	5.71	13.1	2.9	Clear, colorless	Waterra/SS bailer for all parameters	Purged dry after 5.0 gallons
			12.9	1000	2,980	5.61	13.6	0.45	Clear, colorless		
	10/07/97		Sample	1125					Slightly cloudy, light brown		
MW207	10/07/97	4.4	4.4	1610	2,530	7.81	12.8	92.6	Cloudy, light gray	Waterra/SS bailer for all parameters	Good recharge
	10/07/97		Sample	1915					Slightly cloudy, gray		
	10/09/97	4.7	4.7	1744	2,650	6.19	13.2	420	Clear, colorless		
MW209			9.4	1752	2,690	6.24	12.4	488	Cloudy, gray	Waterra/SS bailer for all parameters	Dry after 9.0 gallons
			14.1	1756	2,680	6.52	13.2	1330	Cloudy, gray		
	10/09/97		Sample	2015					Slightly cloudy, light brown		
MW219	10/06/97	3.8	3.8	1534	3,250	5.97	12.1	100.8	Gray/brown, silty	Waterra/SS bailer for all parameters	Dry after 9.0 gallons
	10/06/97		7.6	1539	3,230	6.04	12.0	445	Gray/brown, silty		
	10/06/97		Sample	1830					Clear, colorless		
MW220	10/09/97	5.8	5.8	1630	2,100	8.20	13.2	455	Clear, colorless	Waterra/SS bailer for all parameters	Dry after 9.0 gallons
	10/09/97		Sample	1930					Clear, colorless		
	10/06/97	4.3	4.3	1654	2,550	9.15	13.4	436	Cloudy, light brown, silty		
			8.6	1700	2,280	9.11	16.0	322	Clear, colorless	Waterra/SS bailer for all parameters	Purged dry after two volumes
	10/06/97		Sample	1930					Cloudy, light brown, silty		

TABLE 1
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s/cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW223	10/09/97	3.0	3.0	1537	2,110	7.57	12.2	110	Cloudy, light brown	Waterra/SS bailer for all parameters	Dry after 8.0 gallons
			6.0	1541	2,490	6.00	12.4	122	Cloudy, light brown		,
	10/09/97		Sample	1900					Slightly cloudy, light brown		
MW224	10/09/97	3.1	3.1	1717	3,000	6.66	12.7	97	Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
		6.2		1724	2,980	6.83	11.9	246	Cloudy, brown, silty		
		9.4		1729	3,030	6.76	11.7	818	Cloudy, brown, silty		
	10/09/97		Sample	1945					Slightly cloudy, light brown		
MW301	10/08/97	8.0	8.0	1030	3,500	7.12	13.8	17.6	Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all	Good recharge
		16.0		1035	2,980	7.16	14.4	10.0	Clear, colorless		
		24.0		1042	2,960	7.13	14.7	3.5	Clear, colorless		
	10/08/97		Sample	1400					Clear, colorless		
MW302	10/08/97	8.0	8.0	1528	1,410	7.85	12.3	196	Cloudy, light gray	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Dry after 12.0 gallons
	10/08/97		Sample	1730					Cloudy, light brown		
MW303	10/07/97	6.1	6.1	1337	2,620	8.21	13.0	22.4	Clear, colorless	Waterra/SS bailer for all parameters	Dry after 11.0 gallons
	10/07/97		Sample	1900					Clear, colorless		
MW304	10/07/97	8.6	8.6	1509	3,030	7.86	13.0	65.9	Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Purged dry after two volumes
		17.2		1515	2,950	7.74	13.1	176	Cloudy, light gray		
	10/07/97		Sample	1800					Clear, colorless		
MW305	10/07/97	5.4	5.4	0951	2,540	6.55	14.7	13.8	Clear, colorless	Waterra/SS bailer for all parameters	Good recharge
		10.8		1004	2,580	6.54	15.1	6.8	Clear, colorless		
		16.2		1013	2,610	6.57	14.2	5.4	Clear, colorless		
	10/07/97		Sample	1145					Clear, colorless		
MW306	10/10/97	10.8	10.8	1120	1,420	8.45	12.7	13.2	Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Good recharge
		21.6		1122	1,440	8.68	12.8	8.7	Clear, colorless		
		32.4		1124	1,440	8.69	12.7	5.0	Clear, colorless		
	10/10/97		Sample	1500					Clear, colorless		
MW307	10/09/97	8.0	8.0	1754	2,160	8.32	13.2	353	Clear, colorless	Waterra/SS bailer for all parameters	Dry after 13.5 gallons
	10/09/97		Sample	2045					Cloudy, light brown		
MW309	10/06/97	6.9	6.9	1554	2,460	8.07	12.4	72	Clear, colorless	Waterra/SS bailer	Dry after 13.0 gallons
	10/06/97		Sample	1845					Clear, colorless		

TABLE 1
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW319	10/09/97 10/09/97	8.1	8.1 Sample	1054 1615	2,430	9.35	13.7	550	Clear, colorless Slightly cloudy, light gray	Waterra/Waterra for all parameters	Dry after 10.5 gallons
MW320	10/06/97 10/06/97	12.7	12.7 Sample	1644 1945	1,490	8.14	13.4	51.2	Clear, colorless Clear, colorless	Waterra/SS bailer for all parameters	Dry after 14.0 gallons
MW321	10/09/97 10/09/97	7.3 14.6	7.3 14.6 Sample	1601 1605 1915	1,990 2,020	8.40 8.35	13.0 13.6	106 304	Clear, colorless Clear, colorless Clear, light brown tint	Waterra/SS bailer for all parameters	Dry after 17.0 gallons
MW322	10/10/97 10/10/97	8.1	8.1 Sample	0857 1530	2,890	8.55	13.4	4.6	Clear, colorless Clear, colorless	Grundfos pump with dedicated tubing/SS bailer for all parameters	Dry after 10.0 gallons
MW323	10/10/97 10/10/97	9.1	9.1 Sample	1209 1545	1,710	8.31	12.4	20.4	Clear, colorless Clear, colorless	Grundfos pump with dedicated tubing/SS bailer for all parameters	Dry after 11.0 gallons
MW324	10/10/97 10/10/97	11.2	11.2 Sample	0842 1600	2,240	8.89	13.8	8.7	Clear, colorless Clear, colorless	Grundfos pump with dedicated tubing/SS bailer for all parameters	Dry after 16.0 gallons
MW401	10/09/97 10/09/97	67.7	68.0 Sample	1000 1630	1,920	8.24	14.8	40.7	Cloudy, light brown Clear, light gray	Grundfos pump with dedicated tubing/SS bailer for all parameters	Dry after 90.0 gallons
MW402	10/08/97 10/08/97	62.7	50 Sample	0924 1330	1,680	8.46	14.0	80.3	Clear, colorless Clear, colorless	Grundfos pump with dedicated tubing/SS bailer for all parameters	Dry after 50.0 gallons
MW414	10/08/97 10/08/97	49.8	50.0 Sample	1742 1900	2,310	8.71	12.5	49.1	Clear, colorless Clear, colorless	Grundfos pump with dedicated tubing/SS bailer for all parameters	Dry after 55.0 gallons
MW415	10/08/97 10/08/97	37.0	35.0 Sample	1449 1830	1,870	8.92	12.3	56.2	Cloudy, black Clear, colorless	Grundfos pump with dedicated tubing/SS bailer for all parameters	Purged dry after one volume

TABLE 1
SUMMARY OF MONITORING WELL DEVELOPMENT DATA
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

Well I.D.	Date Purged/Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity ($\mu\text{s}/\text{cm}$)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW420	10/10/97 10/10/97	61.5	59.0 Sample	0832 1700	3,930	12.34	14.7	12.5	Cloudy, brown Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Purged dry after one volume
MW421	10/08/97 10/08/97	47.8 96.0 148.8	47.8 2,140 2,140 2,030 Sample	1626 1652 1703 2000	7.26 7.27 7.05	12.9 12.4 13.2	53 18.4 12.1	Slightly cloudy, light gray Clear, colorless Clear, colorless Clear, colorless	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Good recharge	
MW422	10/08/97 10/08/97	58.8	47.0 Sample	1018 1345	3,770	9.00	13.5	65	Clear, colorless Clear, gray tint	Grundfos pump with dedicated tubing/ SS bailer for all parameters	Purged dry after <one volume
Residential Well #1	10/08/97		Sample	1200	2,070	8.15	15.6	0.62	Clear, colorless, effervescent	Outdoor spigot	Mr. & Mrs. Duley
Residential Well #2	10/08/97		Sample	1230	1,550	7.36	14.2	2.30	Clear, colorless	Basement spigot	Mr. & Mrs. Carver
Residential Well #3	10/08/97		Sample	1915	3,380	7.32	14.7	2.73	Clear, colorless	Outdoor spigot	Ms. Martin

Notes:

SS Bailer - Stainless Steel Bailer.

TABLE 2
SAMPLE KEY
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO
OCTOBER 1997

<i>Sample ID</i>	<i>Well No.</i>	<i>Date Sampled</i>	<i>Chain of Custody No.</i>	<i>Time</i>	<i>Comments</i>
GW-6029-100697-001	MW118	10/06/97	3803	1800	
GW-6029-100697-002	MW109	10/06/97	3803	1815	
GW-6029-100697-003	MW209	10/06/97	3803	1830	
GW-6029-100697-004	MW309	10/06/97	3803	1845	
GW-6029-100697-005	MW309	10/06/97	3803	1900	Blind Duplicate
GW-6029-100697-006	MW110	10/06/97	3803	1915	
GW-6029-100697-007	MW220	10/06/97	3803	1930	
GW-6029-100697-008	MW320	10/06/97	3803	1945	
RB-6029-100697-009	-	10/06/97	3803	2000	Rinse Blank (1)
GW-6029-100797-010	MW116	10/07/97	3803	1100	VOCs Chain 3803 / Metals Chain 3804
GW-6029-100797-011	MW117	10/07/97	3803	1115	
GW-6029-100797-012	MW205	10/07/97	3803	1125	
GW-6029-100797-013	MW305	10/07/97	3803	1145	MS / MSD
GW-6029-100797-014	MW204	10/07/97	3804	1700	
GW-6029-100797-015	MW101	10/07/97	3804	1715	
GW-6029-100797-016	MW201	10/07/97	3804	1730	
GW-6029-100797-017	MW102	10/07/97	3804	1745	
GW-6029-100797-018	MW102	10/07/97	3804	1800	Blind Duplicate
GW-6029-100797-019	MW202	10/07/97	3804	1815	
GW-6029-100797-020	-	10/07/97	3804	1830	Rinse Blank (2)
GW-6029-100797-021	MW203	10/07/97	3804	1845	
GW-6029-100797-022	MW303	10/07/97	3804	1900	
GW-6029-100797-023	MW206	10/07/97	3804	1915	
RW-6029-100897-024	Residential	10/08/97	3804	1200	Duley, MS / MSD
RW-6029-100897-025	Residential	10/08/97	3804	1230	Carver
GW-6029-100897-026	MW402	10/08/97	3804	1330	
GW-6029-100897-027	MW422	10/08/97	3804	1345	
GW-6029-100897-028	MW301	10/08/97	3804	1400	
GW-6029-100897-029	MW302	10/08/97	3805	1730	
GW-6029-100897-030	MW304	10/08/97	3805	1745	
GW-6029-100897-031	MW304	10/08/97	3805	1800	Blind Duplicate
RB-6029-100897-032	-	10/08/97	3805	1815	Rinse Blank (3)
GW-6029-100897-033	MW415	10/08/97	3805	1830	
GW-6029-100897-034	MW414	10/08/97	3805	1900	
RW-6029-100897-035	Residential	10/08/97	3805	1915	Martin
GW-6029-100897-036	MW421	10/08/97	3805	2000	
GW-6029-100897-037	MW4	10/09/97	3806	1400	
GW-6029-100897-038	MW103	10/09/97	3806	1415	
GW-6029-100897-039	MW104	10/09/97	3806	1430	
GW-6029-100897-040	MW104	10/09/97	3806	1445	Blind Duplicate
GW-6029-100897-041	MW105	10/09/97	3806	1500	
GW-6029-100897-042	MW106	10/09/97	3806	1515	
GW-6029-100897-043	MW111	10/09/97	3806	1530	
GW-6029-100897-044	MW114	10/09/97	3806	1545	
GW-6029-100897-045	MW115	10/09/97	3806	1600	
RB-6029-100997-046	-	10/09/97	3806	1550	Rinse Blank (4)
GW-6029-100997-047	MW223	10/09/97	3806	1900	

TABLE 2
SAMPLE KEY
SEVENTH ROUND OF GROUNDWATER SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO
OCTOBER 1997

<i>Sample ID</i>	<i>Well No.</i>	<i>Date Sampled</i>	<i>Chain of Custody No.</i>	<i>Time</i>	<i>Comments</i>
GW-6029-100997-048	MW321	10/09/97	3806	1915	
GW-6029-100997-049	MW219	10/09/97	3806	1930	
GW-6029-100997-050	MW224	10/09/97	3806	1945	
GW-6029-100997-051	MW113	10/09/97	3806	2000	
GW-6029-100997-052	MW207	10/09/97	3806	2015	
GW-6029-100997-053	MW207	10/09/97	3806	2030	Blind Duplicate
GW-6029-100997-054	MW307	10/09/97	3807	2045	
RB-6029-100997-055	-	10/09/97	3807	2100	Rinse Blank (5)
GW-6029-101097-056	MW11	10/10/97	3808	1300	
GW-6029-101097-057	MW107	10/10/97	3808	1430	
GW-6029-101097-058	MW108	10/10/97	3808	1445	
GW-6029-101097-059	MW306	10/10/97	3808	1500	
GW-6029-101097-060	MW306	10/10/97	3808	1515	Blind Duplicate
GW-6029-101097-061	MW322	10/10/97	3808	1530	
GW-6029-101097-062	MW323	10/10/97	3808	1545	
GW-6029-101097-063	MW324	10/10/97	3808	1600	
GW-6029-101097-064	MW319	10/10/97	3808	1615	
GW-6029-101097-065	MW401	10/10/97	3808	1630	
RB-6029-101097-066	-	10/10/97	3808	1645	Rinse Blank (6)
GW-6029-101097-067	MW420	10/10/97	3808	1700	

Notes:

- (1) Blanked bailer used to sample MW220.
- (2) Blanked bailer used to sample MW203.
- (3) Blanked bailer used to sample MW304.
- (4) Blanked bailer used to sample MW223.
- (5) Blanked bailer used to sample MW307.
- (6) Blanked bailer used to sample MW306.

TABLE 3
SUMMARY OF MONITORING WELL REDEVELOPMENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

<i>Date</i>	<i>Beginning Water Level</i>	<i>Time</i>	<i>Volume Purged</i>	<i>pH</i>
MW322 - One Well Volume 8.1 Gallons				
10/06/97	19.32	1303	11.0	12.00
10/06/97	27.35	2030	9.0	10.58
10/07/97	22.02	0830	9.0	9.16
10/07/97	22.80	1950	10.0	9.22
10/08/97	21.75	0820	10.0	9.11
10/08/97	-	2042	10.0	8.88
10/09/97	22.10	0824	10.0	8.98
10/09/97	-	2045	10.0	9.14
10/10/97	21.50	0857	10.0	8.92
MW324 - One Well Volume 11.2 Gallons				
10/06/97	19.88	1318	16.0	9.72
10/06/97	42.72	2015	11.0	9.23
10/07/97	40.61	0820	10.5	9.02
10/07/97	47.27	1940	10.0	9.14
10/08/97	48.40	0810	9.5	9.05
10/08/97	-	2033	9.0	9.02
10/09/97	54.79	0815	8.0	8.95
10/09/97	-	2040	8.0	8.87
10/10/97	57.55	0842	7.5	8.90
MW420 - One Well Volume 61.5 Gallons				
10/06/97	27.00	1235	59.0	11.98
10/06/97	111.02	2003	5.0	12.37
10/07/97	108.43	0756	5.0	12.03
10/07/97	108.96	1927	5.0	11.90
10/08/97	108.47	0757	4.5	11.77
10/08/97	-	2021	4.5	11.97
10/09/97	109.35	0802	4.5	11.84
10/09/97	-	2029	4.5	-
10/10/97	109.15	0832	4.0	11.89

ATTACHMENT A

CHAIN OF CUSTODY RECORDS

CHAIN OF CUSTODY RECORD

CRA CONESTOGA-ROVERS & ASSOCIATES 2055 Niagara Falls Blvd. Suite Three Niagara Falls, NY 14304 (716)297-6150		SHIPPED TO (Laboratory Name): Accutest Labs		REFERENCE NUMBER: 6029-50 Summit National Semi Annual GW Sampling						
SAMPLER'S SIGNATURE:	<i>David Tyran</i>	PRINTED NAME:	David Tyran							
SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	NO. OF CONTAINERS	PARAMETERS	REMARKS			
<i>VOL Spike</i> <i>STOCS</i> <i>Metals</i> <i>WIPERS</i>										
	10-697	1800	GW-6029-100697-001	Water	4	3	1	6.43	1860	
		1815	GW-6029-100697-002		4	3	1	6.43	2190	
		1830	GW-6029-100697-003		6	3	2	6.04	3230	
		1845	GW-6029-100697-004		4	3	1	8.07	2460	
		1900	GW-6029-100697-005		4	3	1	-	-	
		1915	GW-6029-100697-006		6	3	2	6.78	760	
		1930	GW-6029-100697-007		4	3	1	9.11	2280	
		1945	GW-6029-100697-008		4	3	1	8.14	1490	
		2000	RB-6029-100697-009		4	3	1	-	-	
	10-797	1100	GW-6029-100797-010		3	3		6.77	3700	
		1115	GW-6029-100797-011		4	3	1	5.79	2740	
		1125	GW-6029-100797-012		6	3	2	5.61	2980	
		1145	GW-6029-100797-013		12	9	3	6.57	2610	
TRIP BLANK Lab Water 2 2										
Note: Matrix Spike and Matrix Spike Duplicate Volume taken for Sample 013										
TOTAL NUMBER OF CONTAINERS					67	HEALTH/CHEMICAL HAZARDS				
RELINQUISHED BY:	<i>David Tyran</i>		DATE: 10-7-97	RECEIVED BY:					DATE:	
(1)			TIME: 1400	(2)					TIME:	
RELINQUISHED BY:			DATE:	RECEIVED BY:					DATE:	
(2)			TIME:	(3)					TIME:	
RELINQUISHED BY:			DATE:	RECEIVED BY:					DATE:	
(3)			TIME:	(4)					TIME:	
METHOD OF SHIPMENT: Fed Ex					WAY BILL NO. 5152695623					
White	-Fully Executed Copy		SAMPLE TEAM:		RECEIVED FOR LABORATORY BY:					
Yellow	-Receiving Laboratory Copy		<i>D. Tyran</i>							
Pink	-Shipper Copy		<i>J. Varnette</i>							
Goldenrod	-Sampler Copy				DATE: _____	TIME: _____	NF-3803			
1001 (D) OCT 31/94(NF) REV.1 (F-05)										

CHAIN OF CUSTODY RECORD

SHIPPED TO (Laboratory Name):

CRA
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304
(716)297-6150

REFERENCE NUMBER: 6024-50
Summit Natural - Semi-
Annual (Raw Sampling)

SAMPLER'S SIGNATURE:

Dene J. Tyran

PRINTED NAME: David J. Tyran

SEQ. NO.

DATE

TIME

SAMPLE No.

SAMPLE TYPE

NO. OF CONTAINERS

PARAMETERS

REMARKS

SEQ. NO.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	NO. OF CONTAINERS	PARAMETERS	REMARKS
107971700			GW-6024-100797-04	water	6 3	1 1 1 1 1 1	6.66 8.10 Note: Matrix Spike
1715			GW-6024-100797-05	water	4 3	1 1 1 1	5.64 8.30 and Matrix Spike
1730			GW-6024-100797-06	water	4 3	1 1 1 1	7.07 8.40 Duplicate volume
1745			GW-6024-100797-017	water	6 3	1 1 1 1 1 1	9.23 17.0 taken for Sample
REC			GW-6024-100797-018	water	6 3	1 1 1 1 1 1	- O.K.
1815			GW-6024-100797-019	water	6 3	1 1 1 1 1 1	7.92 17.00
1830			RB-6024-100797-020	Lab water	4 3	1 1 1 1	-
1845			GW-6024-100797-021	water	4 3	1 1 1 1	8.40 8.40
1900			GW-6024-100797-022	water	4 3	1 1 1 1	8.40 8.40
1915			GW-6024-100797-023	water	4 3	1 1 1 1	7.81 8.50
1100			GW-6024-100797-010	water	1	1 1 1 1 1 1	6.77 8.70
1029-17	1200		GW-6024-100897-024	water	10 9	6 3	9.15 20.20
1230			GW-6024-100897-025	water	6 3	2 1 1 1 1 1	7.26 15.50
1330			GW-6024-100897-026	water	6 3	1 1 1 1 1 1	9.46 16.80
1345			GW-6024-100897-027	water	4 3	1 1 1 1 1 1	9.00 37.20
V	1100		GW-6024-100897-028	water	4 3	1 1 1 1 1 1	7.13 29.60
			Trip BLANK	Lab water	2 2		
			TOTAL NUMBER OF CONTAINERS		87		HEALTH/ CHEMICAL HAZARDS

RELINQUISHED BY:

Dene J. Tyran

DATE: 10-08-97

TIME: 1700

RECEIVED BY:

J. Verma

DATE:

TIME:

RECEIVED BY:

J. Verma

DATE:

TIME:

RECEIVED BY:

J. Verma

DATE:

TIME:

METHOD OF SHIPMENT:

ED EX

WAY BILL No. 5152693612

White

-Fully Executed Copy

-Receiving Laboratory Copy

D.

Tyran

J. Verma

DATE:

TIME:

Yellow

-Shipper Copy

Goldenrod

-Sampler Copy

J. Verma

DATE:

TIME:

RECEIVED FOR LABORATORY BY:

No NF-3804

CHAIN OF CUSTODY RECORD

CRA
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd. Suite Three
Niagara Falls, NY 14304 (716)297-6150

SHIPPED TO (Laboratory Name):

Accutest Labs

REFERENCE NUMBER: 6009-50
Summit National - Semi Annual
GW Sampling

SAMPLER'S SIGNATURE: Dave Tyran

PRINTED NAME: Dave Tyran

SEQ. No.	DATE	TIME	SAMPLE No.	SAMPLE TYPE	No. OF CONTAINERS	PARAMETERS			REMARKS
						TEMP	SLCD	HAZARD	
12-9-97	1400		GW 6029-100997-037	water	4	3		1	6.33 2560
	1415		GW 6029-100997-038		6	3	2	1	6.15 1560
	1430		GW 6029-100997-039		4	3		1	5.92 2020
	1445		GW 6029-100997-040		4	3		1	- -
	1500		GW 6029-100997-041		4	3		1	5.33 3010
	1515		GW 6029-100997-042		4	3		1	5.60 2680
	1530		GW 6029-100997-043		4	3		1	5.85 2630
	1545		GW 6029-100997-044		4	3		1	4.38 2390
	1600		GW 6029-100997-045		6	3	2	1	6.08 1890
	1550		AB 6029-100997-046	Lab water	4	3		1	- -
	1900		GW 6029-100997-047	water	4	3		1	6.00 2490
	1915		GW 6029-100997-048		4	3		1	8.35 2020
	1930		GW 6029-100997-049		4	3		1	8.20 2100
	1945		GW 6029-100997-050		4	3		1	6.76 3030
	2000		GW 6029-100997-051		4	3		1	6.84 2980
	2015		GW 6029-100997-052		6	3	2	1	6.52 2680
	2030		GW 6029-100997-053		6	3	2	1	- -

TOTAL NUMBER OF CONTAINERS

HEALTH/CHEMICAL HAZARDS

RELINQUISHED BY:	<u>Dave Tyran</u>	DATE: 10-10-97	RECEIVED BY:	DATE:
①		TIME: 1200	②	TIME:
RELINQUISHED BY:		DATE:	RECEIVED BY:	DATE:
②		TIME:	③	TIME:
RELINQUISHED BY:		DATE:	RECEIVED BY:	DATE:
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B

ATTACHMENT B

OCTOBER 1997 ANALYTICAL RESULTS

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997

Page 1

Time Printed: 3:27 pm

<u>Location:</u>	MW4	MW11	MW101	MW102	MW102	MW103	MW104	MW104	
<u>Sample ID:</u>	GW-037	GW-056	GW-015	GW-017	GW-018	GW-038	GW-039	GW-040	
<u>Date Sampled</u>	10/09/97	10/10/97	10/07/97	10/07/97	10/07/97	10/09/97	10/09/97	10/09/97	
<u>Parameters</u>		<u>Units</u>							
<u>Volatile Organic Compounds</u>									
Acetone	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
Ethylbenzene	ug/l	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)
Xylenes, total	ug/l	ND(1)	ND(1.0)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	1.9
Trichloroethene	ug/l	ND(0.54)	22.0	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)
<u>Inorganic Compounds</u>									
Cadmium, total	ug/l	ND(4)	78.4	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	ND(6)	140	ND(3)	10.1	5.3	4.9	4.7	ND(3)
Nickel, total	ug/l	ND(40)	239	73.6	97.8	93.4	ND(40)	ND(40)	ND(40)

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997

Page 2

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<i>Location:</i>	MW105	MW106	MW107	MW108	MW109	MW110	MW111	MW113
<i>Sample ID:</i>	GW-041	GW-042	GW-057	GW-058	GW-002	GW-006	GW-043	GW-051
<i>Date Sampled</i>	10/09/97	10/09/97	10/09/97	10/10/97	10/06/97	10/06/97	10/09/97	10/09/97

Parameters Units

Volatile Organic Compounds

Acetone	ug/l	ND(0.92)	ND(0.92)	1620	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)	ND(4.4)	13.4	ND(0.89)	ND(0.89)	ND(0.89)	8.5
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)	80.0	9.6	ND(0.83)	ND(0.83)	ND(0.83)	83.4
Ethylbenzene	ug/l	ND(0.76)	ND(0.76)	84.1	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)	1020	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)
Xylenes, total	ug/l	ND(1)	ND(1)	303	ND(1.0)	ND(1)	ND(1)	ND(1)	ND(1)
Trichloroethylene	ug/l	ND(0.54)	ND(0.54)	ND(2.7)	1.6	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)	ND(4.6)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)	961	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)

Inorganic Compounds

Cadmium, total	ug/l	ND(4)	ND(4)	ND(4.0)	ND(4.0)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	6.1	ND(3)	ND(3.0)	ND(3.0)	19	6.8	13.5	36.7
Nickel, total	ug/l	ND(40)	ND(40)	41.2	ND(40)	111	ND(40)	ND(40)	90.6

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997

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<i>Location:</i>	MW114	MW115	MW116	MW117	MW118	MW201	MW202	MW203
<i>Sample ID:</i>	GW-044	GW-045	GW-010	GW-011	GW-001	GW-016	GW-019	GW-021
<i>Date Sampled</i>	10/09/97	10/09/97	10/07/97	10/07/97	10/06/97	10/07/97	10/07/97	10/07/97

Parameters Units

Volatile Organic Compounds

Acetone	ug/l	ND(0.92)							
1,1-Dichloroethane	ug/l	ND(0.89)							
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	3.3	ND(0.83)	ND(0.83)	ND(0.83)
Ethylbenzene	ug/l	ND(0.76)							
Toluene	ug/l	ND(0.38)							
Xylenes, total	ug/l	ND(1)							
Trichloroethene	ug/l	ND(0.54)							
1,2-Dichloroethene, total	ug/l	ND(0.92)	7.8	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone {methyl ethyl ketone}	ug/l	ND(0.62)							

Inorganic Compounds

Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	5.4	ND(3)	ND(30)	ND(3)	12.8	3.2	6.3	ND(3)
Nickel, total	ug/l	77.4	ND(40)	ND(40)	47	ND(40)	ND(40)	ND(40)	ND(40)

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997

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<i>Location:</i>	MW204	MW205	MW206	MW207	MW207	MW209	MW219	MW220
<i>Sample ID:</i>	GW-014	GW-012	GW-023	GW-052	GW-053	GW-003	GW-049	GW-007
<i>Date Sampled</i>	10/07/97	10/07/97	10/07/97	10/09/97	10/09/97	10/06/97	10/09/97	10/06/97

Dupl.

<u>Parameters</u>	<u>Units</u>
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Volatile Organic Compounds

Acetone	ug/l	ND(0.92)							
1,1-Dichloroethane	ug/l	ND(0.89)							
1,2-Dichloroethane	ug/l	ND(0.83)							
Ethylbenzene	ug/l	ND(0.76)							
Toluene	ug/l	ND(0.38)							
Xylenes, total	ug/l	ND(1)							
Trichloroethylene	ug/l	ND(0.54)							
1,2-Dichloroethylene, total	ug/l	ND(0.92)							
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)							

Inorganic Compounds

Cadmium, total	ug/l	ND(4)							
Lead, Total	ug/l	5.5	ND(3)	8.8	ND(3)	ND(3)	ND(3)	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)							

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
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<i>Location:</i>	MW223	MW224	MW301	MW302	MW303	MW304	MW304	MW305
<i>Sample ID:</i>	GW-047	GW-050	GW-028	GW-029	GW-022	GW-030	GW-031	GW-013
<i>Date Sampled</i>	10/09/97	10/09/97	10/08/97	10/08/97	10/07/97	10/08/97	10/08/97	10/07/97

Dupl.

<u>Parameters</u>	<u>Units</u>
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Volatile Organic Compounds

Acetone	ug/l	ND(0.92)							
1,1-Dichloroethane	ug/l	3	ND(0.89)						
1,2-Dichloroethane	ug/l	6.2	ND(0.83)						
Ethylbenzene	ug/l	0.89	ND(0.76)						
Toluene	ug/l	ND(0.38)							
Xylenes, total	ug/l	3.2	ND(1)						
Trichloroethene	ug/l	ND(0.54)							
1,2-Dichloroethene, total	ug/l	ND(0.92)							
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)							

Inorganic Compounds

Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	7.4	ND(3)	ND(3)	6.6	3.9	ND(3)	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)	ND(40)	ND(40)	40.3	ND(40)	ND(40)	ND(40)

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
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<i>Location:</i>	MW306	MW306	MW307	MW309	MW309	MW319	MW320	MW321
<i>Sample ID:</i>	GW-059	GW-060	GW-054	GW-004	GW-005	GW-064	GW-008	GW-048
<i>Date Sampled</i>	10/10/97	10/10/97	10/09/97	10/06/97	10/06/97	10/10/97	10/06/97	10/09/97

Parameters Units

Volatile Organic Compounds

Acetone	ug/l	ND(0.92)							
1,1-Dichloroethane	ug/l	ND(0.89)							
1,2-Dichloroethane	ug/l	ND(0.83)	3.6						
Ethylbenzene	ug/l	ND(0.76)							
Toluene	ug/l	ND(0.38)							
Xylenes, total	ug/l	ND(1.0)	ND(1.0)	ND(1)	ND(1)	1.6	ND(1)	ND(1)	ND(1)
Trichloroethene	ug/l	ND(0.54)							
1,2-Dichloroethene, total	ug/l	ND(0.92)							
2-Butanone {methyl ethyl ketone}	ug/l	ND(0.62)							

Inorganic Compounds

Cadmium, total	ug/l	ND(4.0)	ND(4.0)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)
Lead, Total	ug/l	3.8	ND(3.0)	3.2	58.2	ND(3)	3.8	4	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997

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Location:	MW322	MW323	MW324	MW401	MW402	MW414	MW415	MW420
Sample ID:	GW-061	GW-062	GW-063	GW-065	GW-026	GW-034	GW-033	GW-067
Date Sampled	10/10/97	10/10/97	10/10/97	10/10/97	10/08/97	10/08/97	10/08/97	10/10/97

Parameters	Units	MW322	MW323	MW324	MW401	MW402	MW414	MW415	MW420
Volatile Organic Compounds									
Acetone	ug/l	ND(0.92)							
1,1-Dichloroethane	ug/l	ND(0.89)							
1,2-Dichloroethane	ug/l	ND(0.83)							
Ethylbenzene	ug/l	ND(0.76)							
Toluene	ug/l	ND(0.38)							
Xylenes, total	ug/l	ND(1)	ND(1)	ND(1)	ND(1.0)	ND(1)	ND(1)	ND(1)	ND(1.0)
Trichloroethylene	ug/l	ND(0.54)							
1,2-Dichloroethene, total	ug/l	ND(0.92)							
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)							

Inorganic Compounds	Units	MW322	MW323	MW324	MW401	MW402	MW414	MW415	MW420
Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4.0)	ND(4)	ND(4)	ND(4)	ND(4.0)
Lead, Total	ug/l	ND(3)	3.3	ND(3)	5.9	ND(3)	ND(3)	ND(3)	ND(3.0)
Nickel, total	ug/l	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)

Table 1
Summary of Monitoring Well Groundwater Analytical Data
SSPL VOC and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997

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<i>Location:</i>	MW421	MW422
<i>Sample ID:</i>	GW-036	GW-027
<i>Date Sampled</i>	<u>10/08/97</u>	<u>10/08/97</u>

Parameters Units

Volatile Organic Compounds

	ug/l	MW421	MW422
Acetone	ug/l	ND(0.92)	ND(0.92)
1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)
Ethylbenzene	ug/l	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)
Xylenes, total	ug/l	1.7	ND(1)
Trichloroethene	ug/l	ND(0.54)	ND(0.54)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)

Inorganic Compounds

	ug/l	MW421	MW422
Cadmium, total	ug/l	ND(4)	ND(4)
Lead, Total	ug/l	ND(3)	ND(3)
Nickel, total	ug/l	ND(40)	ND(40)

Notes

- Not analyzed.
- ND() Not detected at quantitation limit listed in parentheses.
- U The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity.

Table 2
Summary of Monitoring Well Groundwater Analytical Data
SSPL SVOCs
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

Page 1

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<u>Location:</u>	MW102	MW102	MW102	MW102	MW102	MW103	MW103	MW103
<u>Sample ID:</u>	RW-031	W-LA-019	GW-CJJ-018	GW-017	GW-018	RW-024	W-CJ-023	GW-LMA-013
<u>Date Sampled</u>	11/12/94	05/04/95	10/28/95	10/07/97	10/07/97	11/11/94	05/04/95	10/27/95
Dupl.								

<u>Parameters</u>	<u>Units</u>
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Acid Extractables

2,4-Dimethylphenol	ug/l	ND(10)	ND(10)	ND(10) R	ND(2.7)	ND(2.7)	ND(10) R	ND(10) R	ND(10) R
2-Methylphenol [o-cresol]	ug/l	ND(10)	ND(10)	ND(10) R	ND(1.8)	ND(1.8)	ND(10) R	ND(10) R	ND(10) R
Phenol	ug/l	ND(10)	ND(10)	ND(10) R	ND(2.3)	ND(2.3)	ND(10) R	ND(10) R	ND(10) R
3&4-Methylphenol	ug/l	NA	NA	NA	ND(2.5)	ND(2.5)	NA	NA	NA
4-Methylphenol [p-cresol]	ug/l	ND(10)	ND(10)	ND(10) R	NA	NA	ND(10) R	ND(10) R	ND(10) R

Base/Neutral Extractables

Isophorone	ug/l	ND(10)	ND(10)	ND(10) R	ND(2.4)	ND(2.4)	ND(10)	ND(10)	ND(10)
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Table 2
Summary of Monitoring Well Groundwater Analytical Data
SSPL SVOCs
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

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Time Printed: 12:15 pm

<i>Location:</i>	MW103	MW107	MW107	MW107	MW107	MW108	MW108	MW108
<i>Sample ID:</i>	GW-038	RW-056	W-CJ-056	GW-CJJ-042	GW-057	RW-017	W-CJ-016	GW-058
<i>Date Sampled</i>	10/09/97	11/14/94	05/10/95	10/31/95	10/09/97	11/10/94	05/04/95	10/10/97

Parameters Units

Acid Extractables

2,4-Dimethylphenol	ug/l	ND(1.4)	12	29	14	10.0	ND(10)	UJ	ND(10)	ND(1.4)
2-Methylphenol [o-cresol]	ug/l	ND(0.91)	27	63	27	14.6	ND(10)	UJ	ND(10)	ND(0.91)
Phenol	ug/l	ND(1.2)	310 D	730 UJD	280 D	72.2	ND(10)	UJ	ND(10)	ND(1.2)
3&4-Methylphenol	ug/l	ND(1.2)	NA	NA	NA	104	NA	NA	NA	ND(1.2)
4-Methylphenol [p-cresol]	ug/l	NA	220 D	450 D	260 D	NA	ND(10)	UJ	ND(10)	NA

Base/Neutral Extractables

Isophorone	ug/l	ND(1.2)	20	28	27	ND(1.2)	ND(10)	UJ	ND(10)	ND(1.2)
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Table 2
Summary of Monitoring Well Groundwater Analytical Data
SSPL SVOCs
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

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Time Printed: 12:15 pm

<u>Location:</u>	MW110	MW110	MW110	MW110	MW115	MW115	MW115	MW115
<u>Sample ID:</u>	RW-003A	W-CJ-003	GW-CJJ-028B	GW-006	RW-011	W-LA-028	GW-CJJ-005	GW-045
<u>Date Sampled</u>	11/08/94	05/02/95	10/29/95	10/06/97	11/10/94	05/05/95	10/26/95	10/09/97

<u>Parameters</u>	<u>Units</u>
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Acid Extractables

2,4-Dimethylphenol	ug/l	ND(10)	ND(10)	ND(10)	ND(1.4)	ND(10)	ND(10)	ND(10) R	ND(1.4)
2-Methylphenol [o-cresol]	ug/l	ND(10)	ND(10)	ND(10)	ND(0.91)	ND(10)	ND(10)	ND(10) R	ND(0.91)
Phenol	ug/l	ND(10)	ND(10)	ND(10)	ND(1.2)	ND(10)	ND(10)	ND(10) R	ND(1.2)
3&4-Methylphenol	ug/l	NA	NA	NA	ND(1.2)	NA	NA	NA	ND(1.2)
4-Methylphenol [p-cresol]	ug/l	ND(10)	ND(10)	ND(10)	NA	ND(10)	ND(10)	ND(10) R	NA

Base/Neutral Extractables

Isophorone	ug/l	ND(10)	ND(10)	ND(10)	ND(1.2)	ND(10)	ND(10)	ND(10)	ND(1.2)
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Table 2
Summary of Monitoring Well Groundwater Analytical Data
SSPL SVOCs
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

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Location:	MW202	MW202	MW202	MW202	MW204	MW204	MW204	MW204
Sample ID:	RW-032	W-CJ-020	GW-LMA-019	GW-019	RW-021	W-CJ-035B	GW-LMA-009	GW-014
Date Sampled	11/12/94	05/04/95	10/28/95	10/07/97	11/11/94	05/07/95	10/26/95	10/07/97

Table 2
Summary of Monitoring Well Groundwater Analytical Data
SSPL SVOCs
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

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Time Printed: 12:15 pm

<i>Location:</i>	MW205	MW205	MW205	MW205	MW207	MW207	MW207	MW207
<i>Sample ID:</i>	RW-014	W-LA-026	GW-LMA-003	GW-012	RW-042	W-LA-054	W-LA-055	GW-LMA-043
<i>Date Sampled</i>	<u>11/10/94</u>	<u>05/05/95</u>	<u>10/25/95</u>	<u>10/07/97</u>	<u>11/14/94</u>	<u>05/10/95</u>	<u>05/10/95</u>	<u>10/31/95</u>

Parameters Units

Acid Extractables

2,4-Dimethylphenol	ug/l	ND(10)	ND(10) R	ND(10) R	ND(1.4)	ND(10) UJ	ND(10)	ND(10)	ND(10) R
2-Methylphenol [o-cresol]	ug/l	ND(10)	ND(10) R	ND(10) R	ND(0.91)	ND(10) UJ	ND(10)	ND(10)	ND(10) R
Phenol	ug/l	ND(10)	ND(10) R	ND(10) UJ	ND(1.2)	ND(10) UJ	ND(10) UJ	ND(10) UJ	ND(10) R
3&4-Methylphenol	ug/l	NA	NA	NA	ND(1.2)	NA	NA	NA	NA
4-Methylphenol [p-cresol]	ug/l	ND(10)	ND(10) R	ND(10) R	NA	ND(10) UJ	ND(10)	ND(10)	ND(10) R

Base/Neutral Extractables

Isophorone ug/l ND(10) ND(10) R ND(10) R ND(1.2) ND(10) UJ ND(10) ND(10) ND(10)

Table 2
Summary of Monitoring Well Groundwater Analytical Data
SSPL SVOCs
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

Page 6

Time Printed: 12:15 pm

<i>Location:</i>	MW207	MW207	MW209	MW209	MW209	MW209	MW209
<i>Sample ID:</i>	GW-052	GW-053	RW-007	W-CJ-015	GW-LMA-024	GW-LMA-025	GW-003
<i>Date Sampled</i>	<u>10/09/97</u>	<u>10/09/97</u>	<u>11/08/94</u>	<u>05/04/95</u>	<u>10/28/95</u>	<u>10/28/95</u>	<u>10/06/97</u>
	Dupl.					Dupl.	

Parameters

Units

Acid Extractables

2,4-Dimethylphenol	ug/l	ND(1.4)	ND(1.4)	ND(10) R	ND(10)	ND(10) UJ	ND(10) UJ	ND(1.4)
2-Methylphenol [o-cresol]	ug/l	ND(0.91)	ND(0.91)	ND(10) R	ND(10)	ND(10) UJ	ND(10) UJ	ND(0.91)
Phenol	ug/l	ND(1.2)	ND(1.2)	ND(10) R	ND(10)	ND(10) UJ	ND(10) UJ	ND(1.2)
3&4-Methylphenol	ug/l	ND(1.2)	ND(1.2)	NA	NA	NA	NA	ND(1.2)
4-Methylphenol [p-cresol]	ug/l	NA	NA	ND(10) R	ND(10)	ND(10) UJ	ND(10) UJ	NA

Base/Neutral Extractables

Isophorone ND(1.2) ND(1.2) ND(10) ND(10) ND(10) ND(10) ND(10) ND(10)

Notes

- Not analyzed.
- Not detected at quantitation limit listed in parentheses.
- ND() - The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J - The associated numerical value is an estimated quantity.

Table 3
Summary of Residential Well Analytical Data
SSPL VOCs, SVOCs and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

Page 1

Time Printed: 12:22 pm

<i>Location:</i>	Carver	Carver	Carver	Duley	Duley	Duley	Martin	Martin
<i>Sample ID:</i>	W-CJ-062	GW-CJJ-059	RW-025	W-CJ-061B	GW-CJJ-055	RW-024	RW-057	RW-058
<i>Date Sampled</i>	<u>11/17/94</u>	<u>11/02/95</u>	<u>10/08/97</u>	<u>11/17/94</u>	<u>11/01/95</u>	<u>10/08/97</u>	<u>11/15/94</u>	<u>11/15/94</u>

Dupl.

Volatile Organic Compounds

1,1-Dichloroethane	ug/l	ND(5)	ND(5)	ND(0.89)	ND(5) UJ	ND(5)	ND(0.89)	ND(5)	ND(5)
1,2-Dichloroethane	ug/l	ND(5)	ND(5)	ND(0.83)	ND(5) UJ	ND(5)	ND(0.83)	ND(5)	ND(5)
1,2-Dichloroethene, total	ug/l	ND(5)	ND(5)	ND(0.92)	ND(5) UJ	ND(5)	ND(0.92)	ND(5)	ND(5)
2-Butanone [methyl ethyl ketone]	ug/l	ND(10) UJ	ND(50)	ND(0.62)	ND(10) UJ	ND(50)	ND(0.62)	ND(10)	ND(10)
Acetone	ug/l	ND(10)	ND(50)	ND(0.92)	ND(10) UJ	ND(50)	ND(0.92)	ND(10)	ND(10)
Ethylbenzene	ug/l	ND(5)	ND(5)	ND(0.76)	ND(5) UJ	ND(5)	ND(0.76)	ND(5)	ND(5)
Toluene	ug/l	ND(5)	ND(5)	ND(0.38)	ND(5) UJ	ND(5)	ND(0.38)	ND(5)	ND(5)
Trichloroethene	ug/l	ND(5)	ND(5)	ND(0.54)	ND(5) UJ	ND(5)	ND(0.54)	ND(5)	ND(5)
Xylenes, total	ug/l	ND(5)	ND(5)	ND(1)	ND(5) UJ	ND(5)	ND(1)	ND(5)	ND(5)

Acid Extractables

2,4-Dimethylphenol	ug/l	ND(10)	ND(10)	ND(2.7)	ND(10)	ND(10)	ND(1.4)	ND(10)	ND(10)
2-Methylphenol [o-cresol]	ug/l	ND(10)	ND(10)	ND(1.8)	ND(10)	ND(10)	ND(0.91)	ND(10)	ND(10)
3&4-Methylphenol	ug/l	NA	NA	ND(2.5)	NA	NA	ND(1.2)	NA	NA
4-Methylphenol [p-cresol]	ug/l	ND(10)	ND(10)	NA	ND(10)	ND(10)	NA	ND(10)	ND(10)
Phenol	ug/l	ND(10)	ND(10)	ND(2.3)	ND(10)	ND(10)	ND(1.2)	ND(10)	ND(10)

Base/Neutral Extractables

Inorganic Compounds

Cadmium, total	ug/l	ND(5)	ND(5.0)	ND(4)	ND(5)	ND(5.0)	ND(4)	ND(5)	ND(5)
Lead, total	ug/l	ND(1) UJ	ND(1.0)	ND(3)	ND(1) UJ	1.0 J	4.8	ND(1) UJ	ND(1) UJ
Nickel, total	ug/l	ND(20)	ND(20.0)	ND(40)	ND(20)	ND(20.0)	ND(40)	ND(20)	ND(20)

Table 3
Summary of Residential Well Analytical Data
SSPL VOCs, SVOCs and Metals
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

Page 2

Time Printed: 12:22 pm

Location: Martin
Sample ID: RW-035
Date Sampled: 10/08/97

Parameters Units

Volatile Organic Compounds

1,1-Dichloroethane	ug/l	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)
Acetone	ug/l	ND(0.92)
Ethylbenzene	ug/l	1.1
Toluene	ug/l	2.2
Trichloroethene	ug/l	ND(0.54)
Xylenes, total	ug/l	4.8

Acid Extractables

2,4-Dimethylphenol	ug/l	ND(1.4)
2-Methylphenol [o-cresol]	ug/l	ND(0.91)
3&4-Methylphenol	ug/l	ND(1.2)
4-Methylphenol [p-cresol]	ug/l	NA
Phenol	ug/l	ND(1.2)

Base/Neutral Extractables

Isophorone	ug/l	ND(1.2)
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Inorganic Compounds

Cadmium, total	ug/l	ND(4)
Lead, total	ug/l	4.4
Nickel, total	ug/l	ND(40)

Notes

- Not analyzed.
- ND() Not detected at quantitation limit listed in parentheses.
- U The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity.

Table 4

Page 1

**Summary of Groundwater Analytical Data
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997**

Time Printed: 12:22 pm

<i>Location:</i>	Rinse Blank1	Rinse Blank2	Rinse Blank3	Rinse Blank4	Rinse Blank5	Rinse Blank6
<i>Sample ID:</i>	RB-009	RB-020	RB-032	RB-046	RB-055	GW-066
<i>Date Sampled</i>	10/06/97	10/07/97	10/08/97	10/09/97	10/09/97	10/10/97

<u>Parameters</u>	<u>Units</u>
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Volatile Organic Compounds

1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)
Acetone	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
Ethylbenzene	ug/l	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)
Trichloroethylene	ug/l	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1.0)

Acid Extractables

2,4-Dimethylphenol	ug/l	NA	NA	ND(1.4)	NA	NA	NA
2-Methylphenol [o-cresol]	ug/l	NA	NA	ND(0.91)	NA	NA	NA
3&4-Methylphenol	ug/l	NA	NA	ND(1.2)	NA	NA	NA
Phenol	ug/l	NA	NA	ND(1.2)	NA	NA	NA

Base/Neutral Extractables

Isophorone	ug/l	NA	NA	ND(1.2)	NA	NA	NA
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Inorganic Compounds

Cadmium, total	ug/l	ND(4)	ND(4)	ND(4)	ND(4)	ND(4)	ND(4.0)
Lead, total	ug/l	3.4	12.4	ND(3)	ND(3)	ND(3)	ND(3.0)
Nickel, total	ug/l	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)	ND(40)

Notes

- Not analyzed.
- ND() Not detected at quantitation limit listed in parentheses.
- U The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity.

Table 5

Page 1 (a)

**Summary of Groundwater Analytical Data
Summit National Superfund Site
Deerfield Township of Portage County, Ohio
October 1997**

Time Printed: 2:59 pm

<i>Location:</i>	Trip Blank1	Trip Blank2	Trip Blank3	Trip Blank4
<i>Sample ID:</i>	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK
<i>Date Sampled:</i>	<u>10/02/97</u>	<u>10/02/97</u>	<u>10/02/97</u>	<u>10/02/97</u>

<u>Parameters</u>	<u>Units</u>				
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Volatile Organic Compounds

1,1-Dichloroethane	ug/l	ND(0.89)	ND(0.89)	ND(0.89)	ND(0.89)
1,2-Dichloroethane	ug/l	ND(0.83)	ND(0.83)	ND(0.83)	ND(0.83)
1,2-Dichloroethene, total	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
2-Butanone [methyl ethyl ketone]	ug/l	ND(0.62)	ND(0.62)	ND(0.62)	ND(0.62)
Acetone	ug/l	ND(0.92)	ND(0.92)	ND(0.92)	ND(0.92)
Ethylbenzene	ug/l	ND(0.76)	ND(0.76)	ND(0.76)	ND(0.76)
Toluene	ug/l	ND(0.38)	ND(0.38)	ND(0.38)	ND(0.38)
Trichloroethene	ug/l	ND(0.54)	ND(0.54)	ND(0.54)	ND(0.54)
Xylenes, total	ug/l	ND(1)	ND(1)	ND(1)	ND(1)

Notes

- Not analyzed.
- Not detected at quantitation limit listed in parentheses.
- ND() - The material was analyzed for but was qualified as non-detected due to blank contamination. The associated numerical value is the sample quantitation limit.
- J - The associated numerical value is an estimated quantity.

C

ATTACHMENT C
DATA QUALITY ASSESSMENT

MEMO

TO: Stephen Whillier REFERENCE NO. 6029-50

FROM: Nancy Bergstrom *NMB* DATE: November 10, 1997

C.C.: Steve Day

RE: Data Quality Assessment and Validation for Groundwater Samples Collected During the Seventh Groundwater Sampling Event at the Summit National Superfund Site in Deerfield Township of Portage County, Ohio

The following details an analytical data quality assessment of the data resulting from the October 1997 collection of groundwater samples during the seventh groundwater sampling event at the above-referenced Site. The samples, identified in Table 1, were analyzed for the parameters presented in Table 2 by Accutest in Dayton, New Jersey using the analytical methods presented in Table 2. The quality control criteria used to assess the data were established by the methods and the Site-specific quality assurance project plan.¹

Holding Time Periods

The holding time periods for the analyses are listed in Table 3. The samples were prepared and analyzed within the required holding time periods as indicated by the sample collection and analysis dates on the chain-of-custody documents and the analytical reports provided by the laboratory.

Method Blank Samples

Contamination of samples contributed by laboratory conditions or procedures was monitored by the data from concurrent preparation and analysis of method blank samples. The method blank samples were reported to be free of detectable concentrations of target analytes, indicating no significant laboratory contamination occurred.

¹Application of quality assurance criteria was consistent with "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", EPA-540/R-94/012, February 1994 and "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", EPA-540/R-94-013, February 1994.

Surrogate Compound Percent Recoveries (Surrogate Recoveries)

Individual sample performance for the organic analyses was monitored by surrogate compound percent recoveries. The surrogate recovery acceptance criteria were met.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recoveries - Organics

To assess the long-term accuracy and precision of the analytical methods relative to the sample matrices, MS/MSD percent recoveries and relative percent differences (RPDs) were determined. The phenol MS/MSD percent recovery violated the acceptance criteria in one SVOC MS/MSD sample and the phenol quantitation limit for sample GW-6029-100697-006 should be qualified as estimated (UJ). All remaining MS/MSD percent recovery and RPD data were acceptable.

Matrix Spike (MS) Percent Recoveries - Inorganics

In order to evaluate the effects that the sample matrix may have on the digestion and measurement procedures of an analysis, samples were fortified with a known concentrations of the analytes and analyzed as matrix spike samples. The MS sample data were acceptable.

Duplicate Sample Analysis - Inorganics

The precision of the inorganic method was monitored from the analysis of duplicate samples. The duplicate sample data were acceptable.

Check Sample Percent Recoveries

Check sample percent recoveries were examined to assess the overall performance and accuracy of the laboratory procedures. Table 4 presents the data not previously qualified which should be qualified due to violation of check sample percent recovery acceptance criteria. The remaining check sample percent recovery data were acceptable.

Field Duplicate Samples

To assess the overall field and laboratory precision of the sampling and analysis effort, six field duplicate sample sets were collected. Table 5 presents the results of the detected analytes in the field duplicate sample sets. The lead result for sample GW-6029-100697-004 should be qualified as estimated (J) due to the difference between the original and duplicate sample results. Although a RPD could not be calculated since lead was not detected in the duplicate sample, the RPD between the original result and the detection limit is equal to 180% and was deemed unacceptable. In general, the remaining data indicate that an acceptable level of precision was achieved.

Trip Blank Samples

To monitor for cross-contamination of VOC samples during sample transport and storage, five trip blank samples were submitted with the investigative samples. The trip blank samples were reported to be free of detectable concentrations of target analytes.

Rinsate Blank Samples

Six rinsate blank samples were collected to evaluate the effectiveness of the field decontamination procedures. Table 6 presents the data which should be qualified due to field rinsate sample contamination.

Completeness

Completeness, as required by the total number of usable results versus the total number of results was required to be 90 percent or greater. The data were considered usable and the completeness criteria was determined to have been met.

Overall Assessment

The data were found to exhibit acceptable levels of accuracy and precision and may be used with the qualifications noted.

NB/pg/28
Attachments

TABLE 1

**SAMPLE IDENTIFICATION NUMBERS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO**

GW-6029-100697-001	RW-6029-100897-035
GW-6029-100697-002	GW-6029-100897-036
GW-6029-100697-003	GW-6029-100997-037
GW-6029-100697-004	GW-6029-100997-038
GW-6029-100697-005	GW-6029-100997-039
GW-6029-100697-006	GW-6029-100997-040
GW-6029-100697-007	GW-6029-100997-041
GW-6029-100697-008	GW-6029-100997-042
RB-6029-100697-009	GW-6029-100997-043
GW-6029-100797-010	GW-6029-100997-044
GW-6029-100797-011	GW-6029-100997-045
GW-6029-100797-012	RB-6029-100997-046
GW-6029-100797-013	GW-6029-100997-047
GW-6029-100797-014	GW-6029-100997-048
GW-6029-100797-015	GW-6029-100997-049
GW-6029-100797-016	GW-6029-100997-050
GW-6029-100797-017	GW-6029-100997-051
GW-6029-100797-018	GW-6029-100997-052
GW-6029-100797-019	GW-6029-100997-053
RB-6029-100797-020	GW-6029-100997-054
GW-6029-100797-021	RB-6029-100997-055
GW-6029-100797-022	GW-6029-101097-056
GW-6029-100797-023	GW-6029-101097-057
RW-6029-100797-024	GW-6029-101097-058
RW-6029-100797-025	GW-6029-101097-059
GW-6029-100797-026	GW-6029-101097-060
GW-6029-100797-027	GW-6029-101097-061
GW-6029-100797-028	GW-6029-101097-062
GW-6029-100897-029	GW-6029-101097-063
GW-6029-100897-030	GW-6029-101097-064
GW-6029-100897-031	GW-6029-101097-065
RB-6029-100897-032	RB-6029-101097-066
GW-6029-100897-033	GW-6029-101097-067
GW-6029-100897-034	

TABLE 2

ANALYTICAL METHODS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

<i>Parameter</i>	<i>Analytical Method</i>	
SSIPL ¹ Volatile Organic Compounds (VOC)	SW-846 ²	8240
SSIPL ³ Semivolatile Organic Compound (SVOC)	SW-846	8270
Cadmium, Lead, Nickel	SW-846	6010

¹ Site-Specific Indicator Parameter List (SSIPL) VOCs include: acetone, 1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloroethene (total), ethylbenzene, toluene, xylenes (total), trichloroethene, and 2-butanone.

² "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA SW-846, 3rd Edition, November 1986 with promulgated updates.

³ Site-Specific Indicator Parameter List (SSIPL) SVOCs include: 2,4-dimethylphenol, 2-methylphenol, 3&4-methylphenol, phenol, and isophorone.

TABLE 3

**HOLDING TIME PERIODS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO**

<i>Parameter</i>	<i>Holding Time Period</i>
SSIPL VOC	- 14 days from sample collection to completion of analysis
SSIPL SVOC	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis
Cadmium, Lead, Nickel	- 6 months from sample collection to completion of analysis

TABLE 4

**QUALIFICATION OF SAMPLE DATA DUE TO
VIOLATION OF CHECK SAMPLE ACCEPTANCE CRITERIA
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO**

<i>Analyte</i>	<i>Sample ID</i>	<i>Qualifier</i> ¹
Phenol	GW-6029-100697-003	UJ
	GW-6029-100797-012	UJ
	RB-6029-100897-032	UJ
	RW-6029-100897-035	UJ
	GW-6029-100997-038	UJ
	GW-6029-100997-045	UJ
	GW-6029-100997-052	UJ
	GW-6029-100997-053	UJ
	GW-6029-101097-057	J
	GW-6029-101097-058	UJ

¹ The sample results should be qualified as:

Organics

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

TABLE 5
SUMMARY OF DETECTED ANALYTES¹
FIELD DUPLICATE SAMPLE SETS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO

<i>Parameter</i>	<i>Investigative Sample</i> GW-6029-100697-004	<i>Duplicate Sample</i> GW-6029-100697-005	<i>RPD</i> ²
Xylenes (total)	ND(1.0) ³	1.6	NC ⁴
Lead	58.2	ND(3.0)	NC
<i>Parameter</i>	<i>Investigative Sample</i> GW-6029-100797-017	<i>Duplicate Sample</i> GW-6029-100797-018	<i>RPD</i>
Nickel	97.8	93.4	4.6
<i>Parameter</i>	<i>Investigative Sample</i> GW-6029-100997-039	<i>Duplicate Sample</i> GW-6029-100997-040	<i>RPD</i>
Lead	4.7	ND(3.0)	NC
Xylenes (total)	ND(1.0)	1.9	NC
<i>Parameter</i>	<i>Investigative Sample</i> GW-6029-101097-059	<i>Duplicate Sample</i> GW-6029-101097-060	<i>RPD</i>
Lead	3.8	ND(3.0)	NC

¹ Results reported in micrograms per liter ($\mu\text{g}/\text{L}$).

² RPD = Relative Percent Difference

³ ND () = Not detected at the quantitation limit stated in parentheses.

⁴ NC = Not calculable.

TABLE 6

**QUALIFICATION OF SAMPLE DATA DUE TO
RINSATE BLANK CONTAMINATION
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO**

<i>Analyte</i>	<i>Associated Samples</i>	<i>Qualified Sample Result¹</i> ($\mu\text{g/L}$)
Lead	GW-6029-100697-001	U(12.8)
	GW-6029-100697-006	U(6.8)
	GW-6029-100697-007	U(6.4)
	GW-6029-100697-008	U(4.0)
	GW-6029-100797-014	U(5.5)
	GW-6029-100797-016	U(3.2)
	GW-6029-100797-017	U(10.1)
	GW-6029-100797-018	U(5.3)
	GW-6029-100797-019	U(6.3)
	GW-6029-100797-022	U(3.9)
	GW-6029-100797-023	U(8.8)
	RW-6029-100797-024	U(4.8)

¹ The sample results should be qualified as:

Inorganics

U() - The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or sample detection limit.

D

ATTACHMENT D
GROUNDWATER ELEVATIONS AND HYDROGRAPHS

**OCTOBER 1997 GROUNDWATER ELEVATIONS
WATER TABLE UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

WELL DESIGNATION	REFERENCE ELEVATION <i>ft. AMSL</i>	GROUNDWATER	
		10/6/97	
		<i>Level</i> <i>ft.</i>	<i>Elev.</i> <i>ft. AMSL</i>
MW-4	1091.09	11.18	1,079.91
MW-11	1,095.93	21.43	1,074.50
MW-101	1,107.57	10.56	1,097.01
MW-102	1,100.17	8.62	1,091.55
MW-103	1,096.22	4.45	1,091.77
MW-104	1,099.81	24.37	1,075.44
MW-105	1,101.32	25.71	1,075.61
MW-106	1,102.88	26.10	1,076.78
MW-107	1,098.27	20.68	1,077.59
MW-108	1,091.96	15.90	1,076.06
MW-109	1,087.42	6.66	1,080.76
MW-110	1,086.87	11.47	1,075.40
MW-111	1,099.67	26.40	1,073.27
MW-113	1,088.46	12.88	1,075.58
MW-114	1,097.27	18.06	1,079.21
MW-115	1,101.83	26.69	1,075.14
MW-116	1,105.54	25.60	1,079.94
MW-117	1,123.97	50.64	1,073.33
MW-118	1,098.38	28.45	1,069.93
PZ-1	1,104.43	11.55	1,092.88
PZ-101	1,108.53	17.49	1,091.04
PZ-102	1,100.21	14.25	1,085.96
PZ-103	1,093.98	10.36	1,083.62
PZ-104	1,097.54	18.80	1,078.74
PZ-105	1,101.60	26.52	1,075.08
PZ-106	1,102.23	28.74	1,073.49
MH-1	1102.78	27.17	1,075.61
MH-2	1101.04	26.03	1,075.01
MH-3	1100.95	26.40	1,074.55
MH-4	1100.05	28.02	1,072.03
MH-5	1095.68	25.13	1,070.55
MH-6	1088.64	15.07	1,073.57
MH-7	1089.29	13.20	1,076.09
MH-8	1089.23	11.60	1,077.63
WET WELL	1098.86	28.30	1,070.56

**OCTOBER 1997 GROUNDWATER ELEVATIONS
UPPER INTERMEDIATE UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

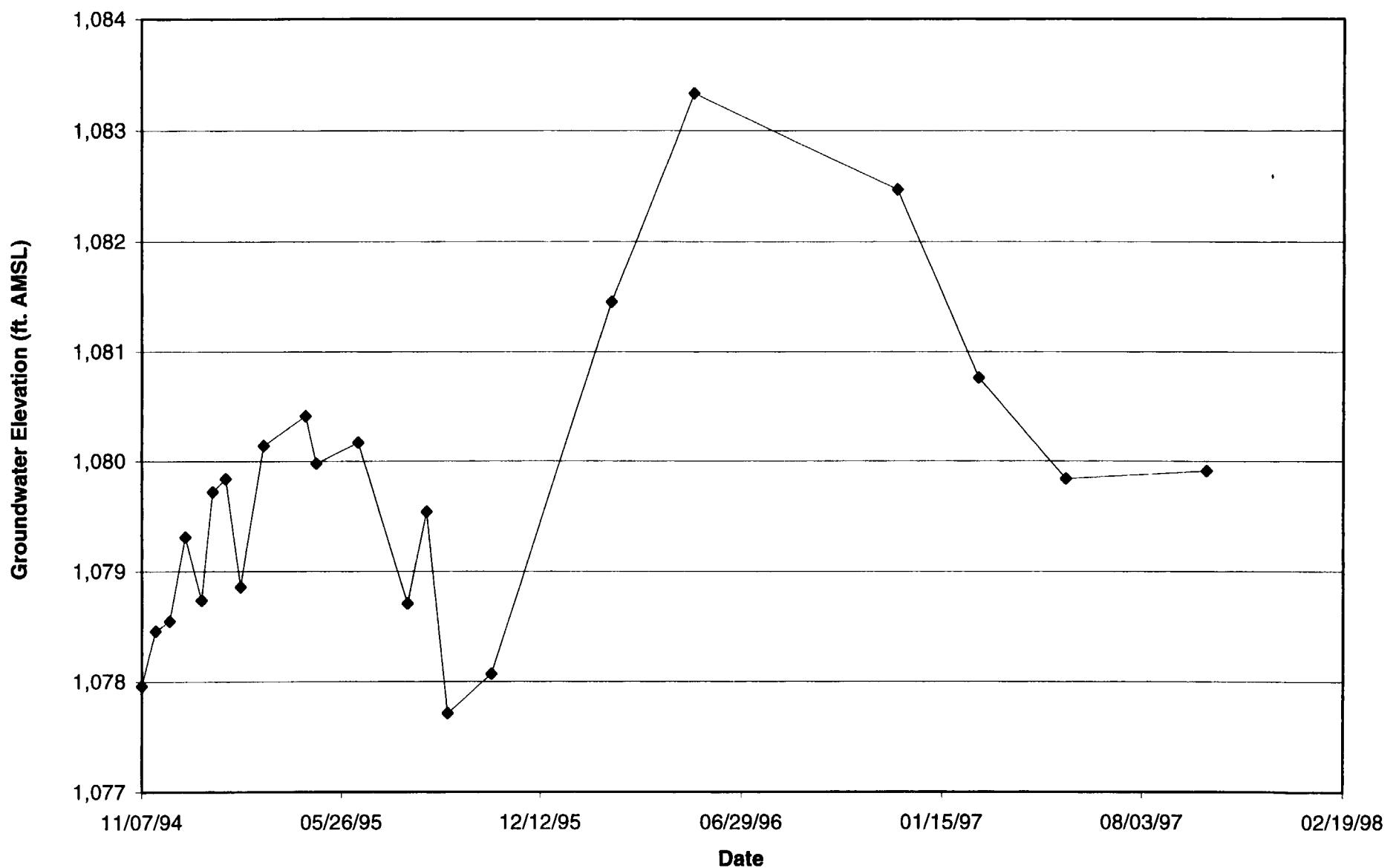
WELL DESIGNATION	REFERENCE ELEVATION <i>ft. AMSL</i>	GROUNDWATER	
		10/6/97	
		<i>Level</i> <i>ft.</i>	<i>Elev.</i> <i>ft. AMSL</i>
MW-201	1,107.52	13.73	1,093.79
MW-202	1,099.50	28.67	1,070.83
MW-203	1,103.35	13.34	1,090.01
MW-204	1,098.01	14.33	1,083.68
MW-205	1,100.90	25.94	1,074.96
MW-206	1,103.22	35.77	1,067.45
MW-207	1,098.51	20.40	1,078.11
MW-209	1,087.66	13.51	1,074.15
MW-219	1,108.24	26.45	1,081.79
MW-220	1,090.92	11.78	1,079.14
MW-223	1,098.37	26.24	1,072.13
MW-224	1,089.41	16.64	1,072.77
PZ-201	1,099.74	23.00	1,076.74
PZ-202	1,101.56	24.39	1,077.17
PZ-203	1,098.31	24.70	1,073.61
PZ-204	1,095.41	17.71	1,077.70
PZ-205	1,096.63	20.75	1,075.88
PZ-206	1,088.05	16.65	1,071.40
PZ-207	1,091.36	16.22	1,075.14

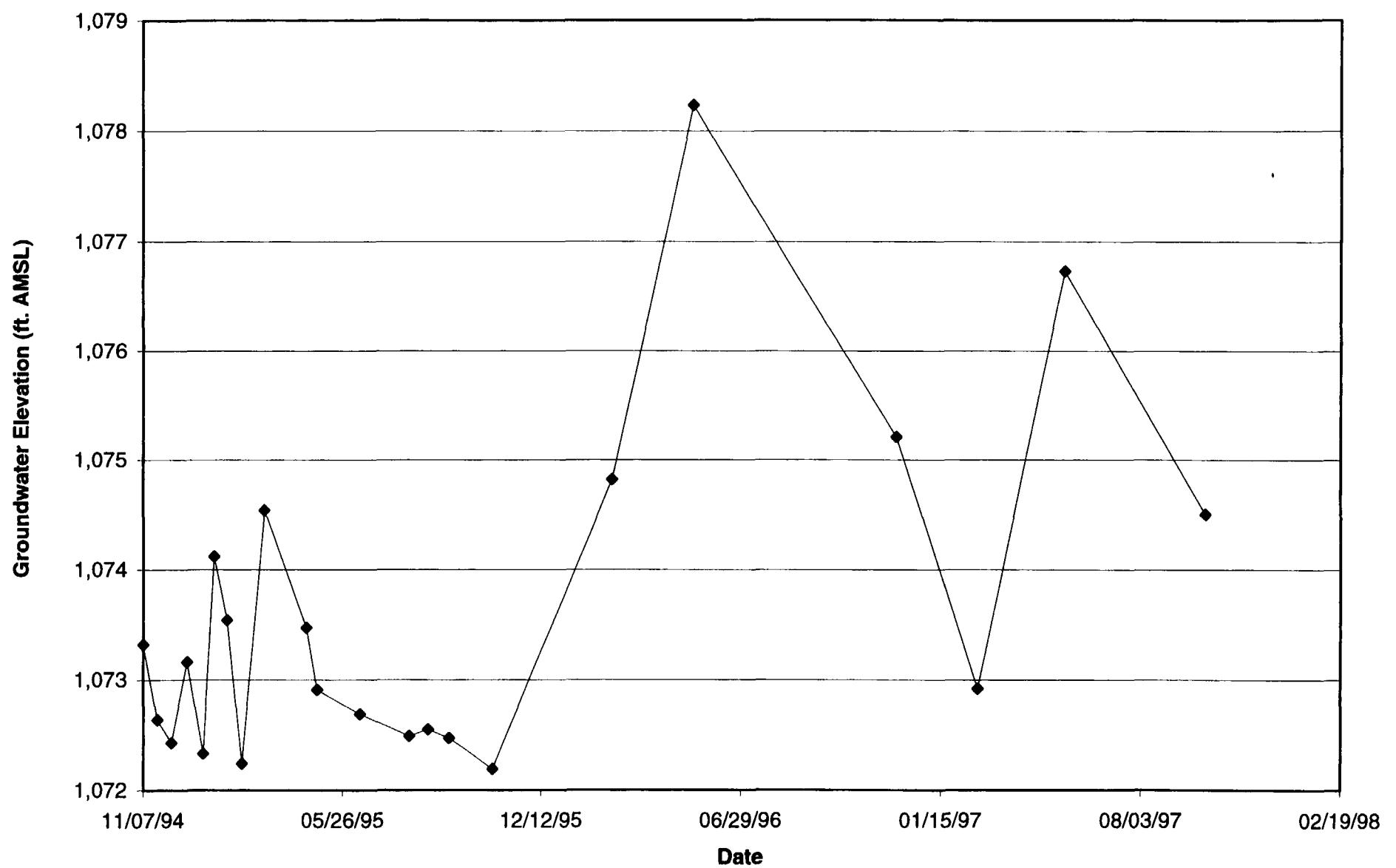
**OCTOBER 1997 GROUNDWATER ELEVATIONS
LOWER INTERMEDIATE UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

WELL DESIGNATION	REFERENCE ELEVATION <i>ft. AMSL</i>	GROUNDWATER	
		10/6/97	
		<i>Level</i> <i>ft.</i>	<i>Elev.</i> <i>ft. AMSL</i>
MW-301	1107.91	31.35	1,076.56
MW-302	1100.39	29.62	1,070.77
MW-303	1103.15	30.50	1,072.65
MW-304	1097.73	18.35	1,079.38
MW-305	1101.22	31.86	1,069.36
MW-306	1103.14	31.89	1,071.25
MW-307	1098.83	27.36	1,071.47
MW-309	1087.81	16.60	1,071.21
MW-319	1108.07	26.30	1,081.77
MW-320	1091.14	22.05	1,069.09
MW-321	1095.32	23.62	1,071.70
MW-322	1098.88	19.32	1,079.56
MW-323	1097.51	27.24	1,070.27
MW-324	1089.39	19.88	1,069.51
PZ-301	1100.07	21.58	1,078.49
PZ-302	1101.25	29.59	1,071.66
PZ-303	1098.39	27.24	1,071.15
PZ-305	1096.49	25.14	1,071.35
PZ-306	1088.35	18.16	1,070.19
PZ-307	1091.40	21.31	1,070.09

**OCTOBER 1997 GROUNDWATER ELEVATIONS
UPPER SHARON UNIT MONITORING WELLS
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

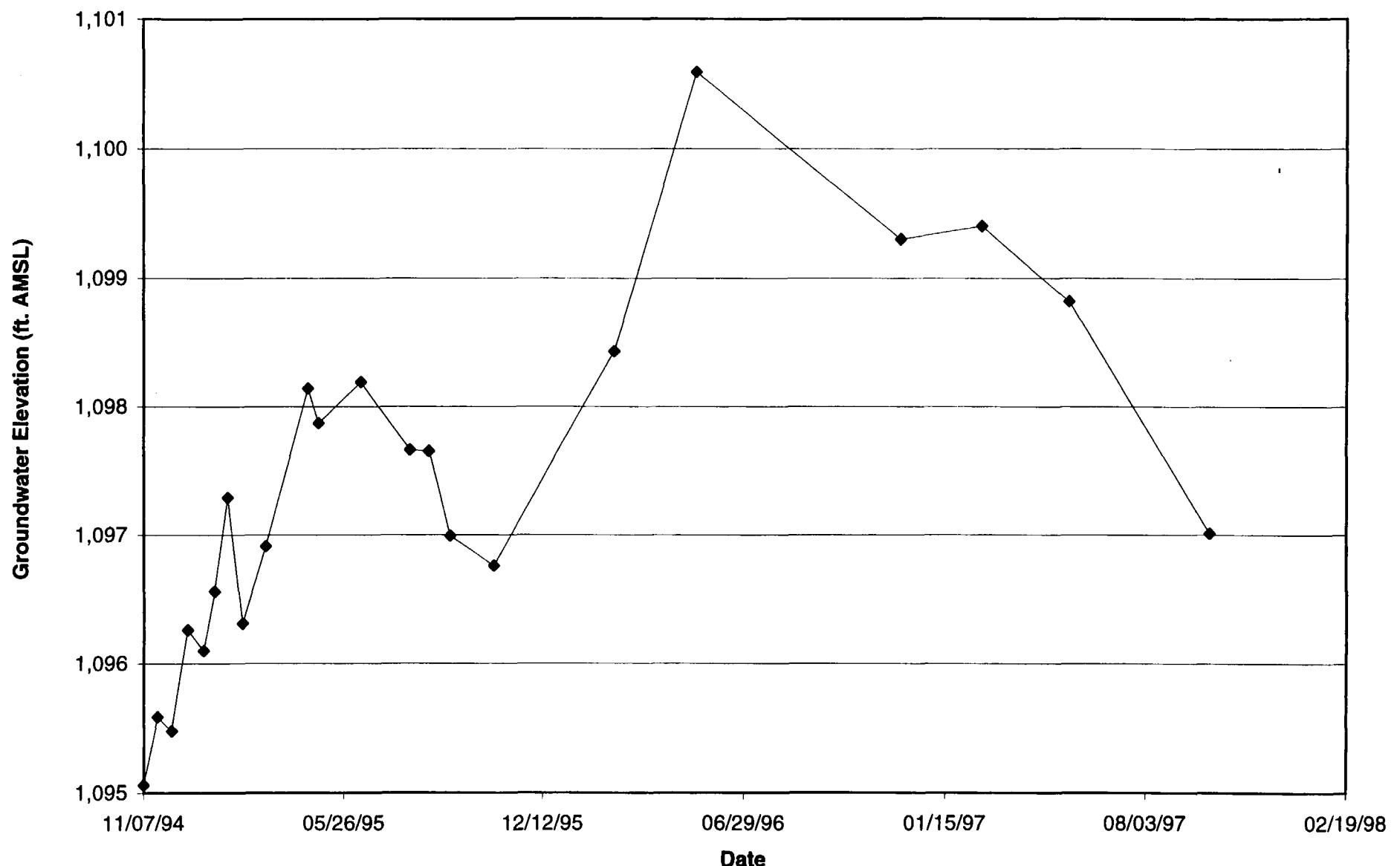
WELL DESIGNATION	REFERENCE ELEVATION <i>ft. AMSL</i>	GROUNDWATER	
		10/6/97	
		<i>Level</i> <i>ft.</i>	<i>Elev.</i> <i>ft. AMSL</i>
MW-401	1,099.75	37.48	1,062.27
MW-402	1,089.90	34.70	1,055.20
MW-414	1,096.99	29.82	1,067.17
MW-415	1,102.25	32.71	1,069.54
MW-420	1,091.66	27.00	1,064.66
MW-421	1,099.93	30.62	1,069.31
MW-422	1,107.38	21.99	1,085.39
POT. WELL	1,099.34	75.90	1,023.44

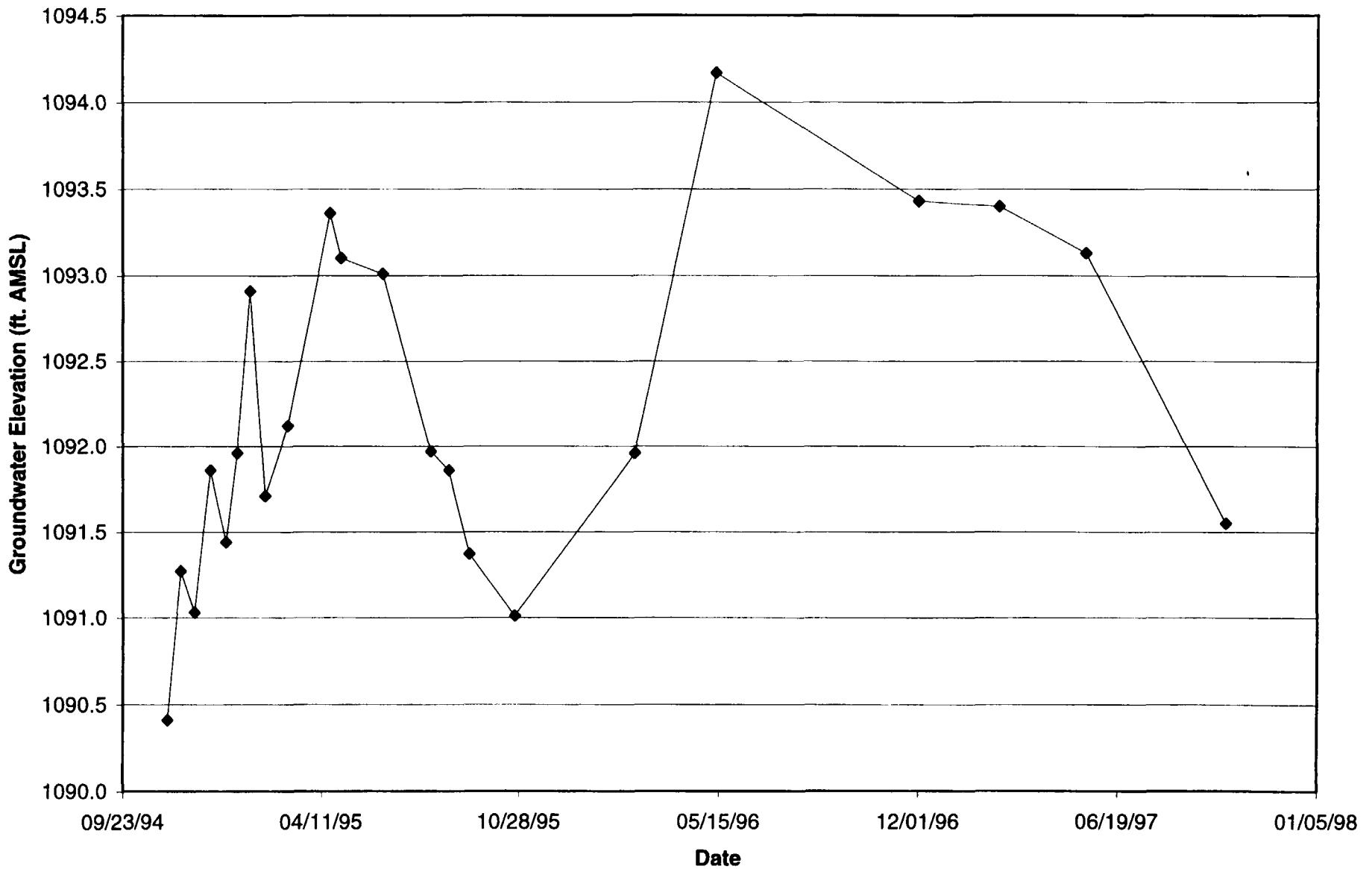




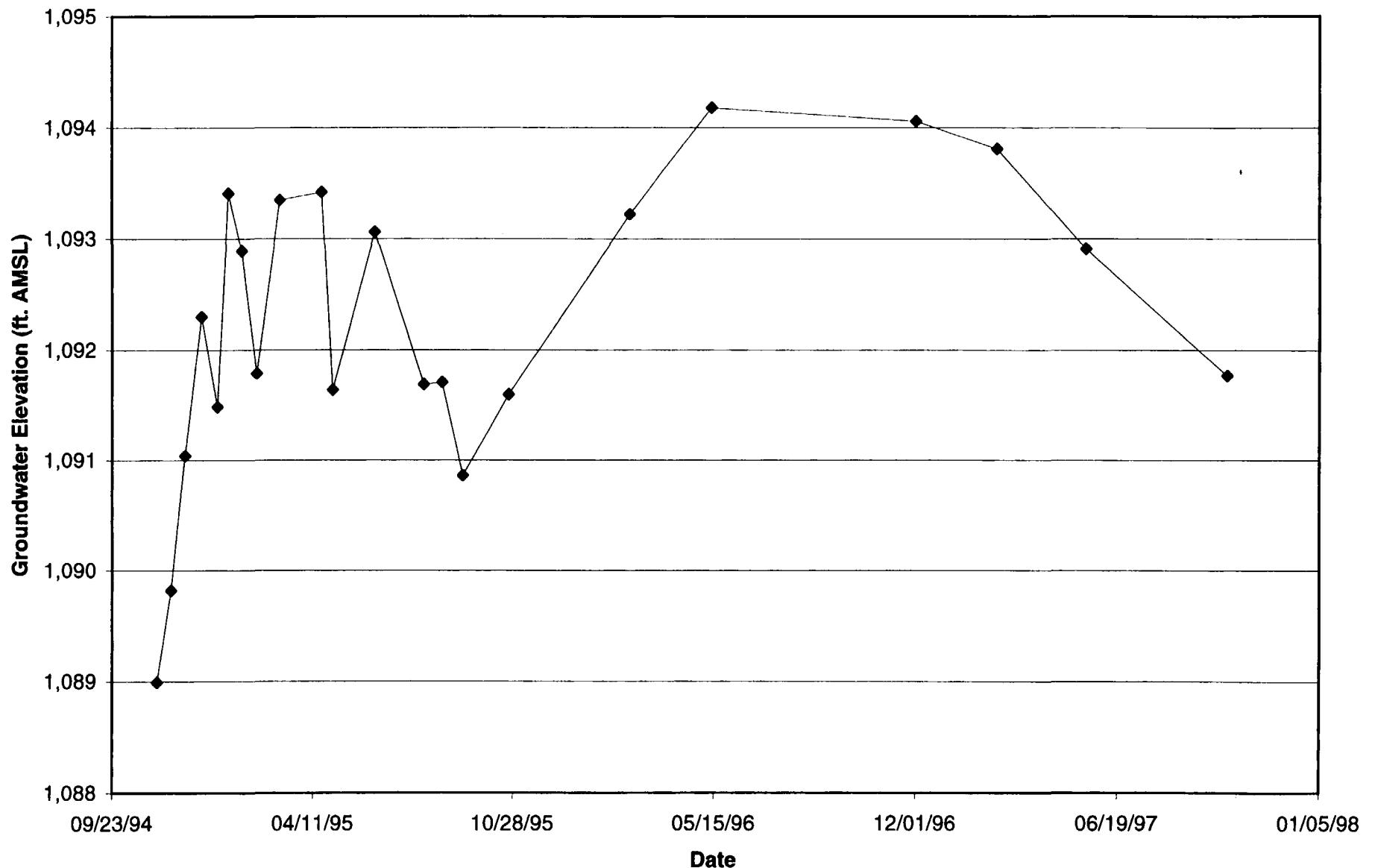
CRA - 6029 (19/11/97)

GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-11
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

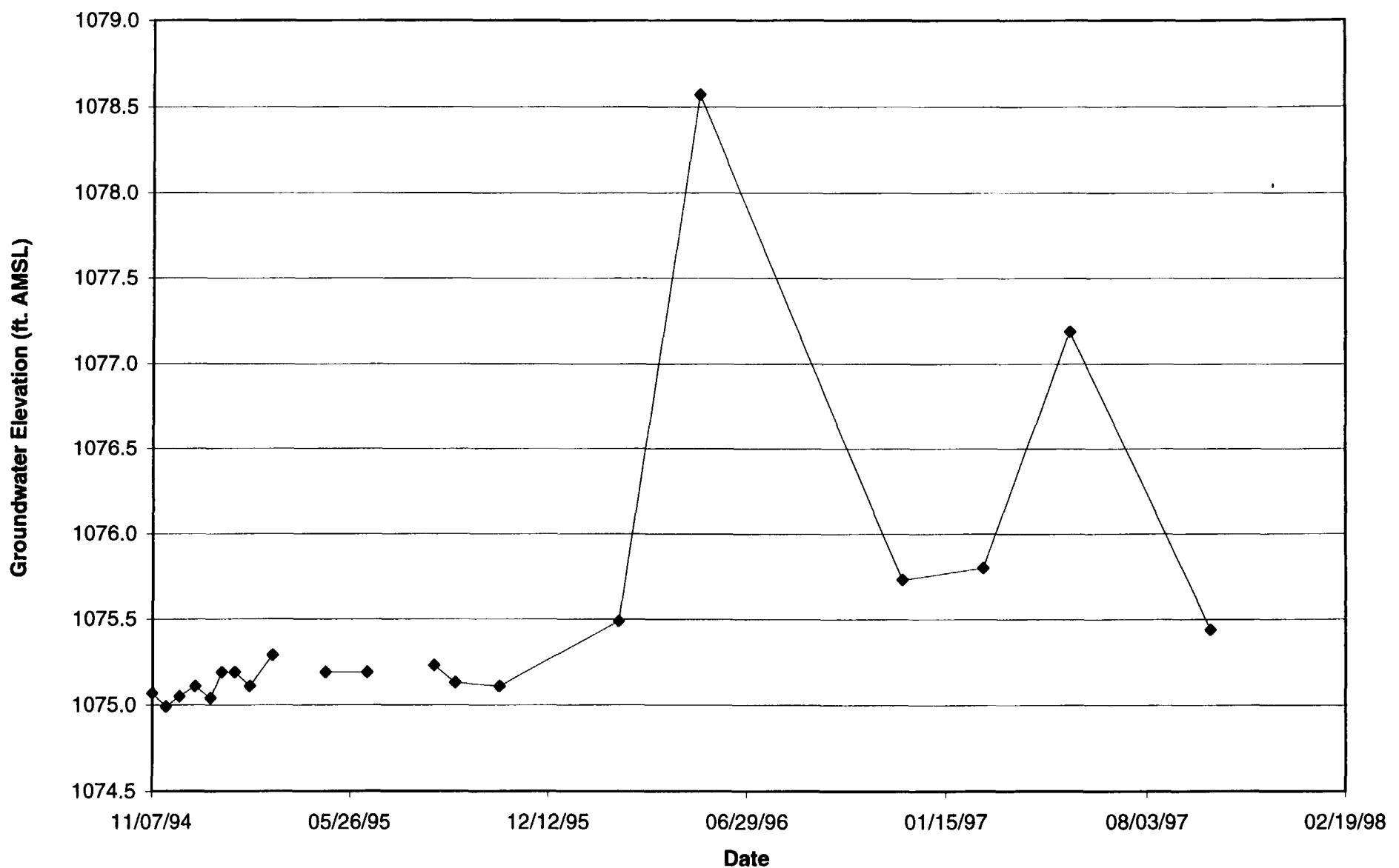


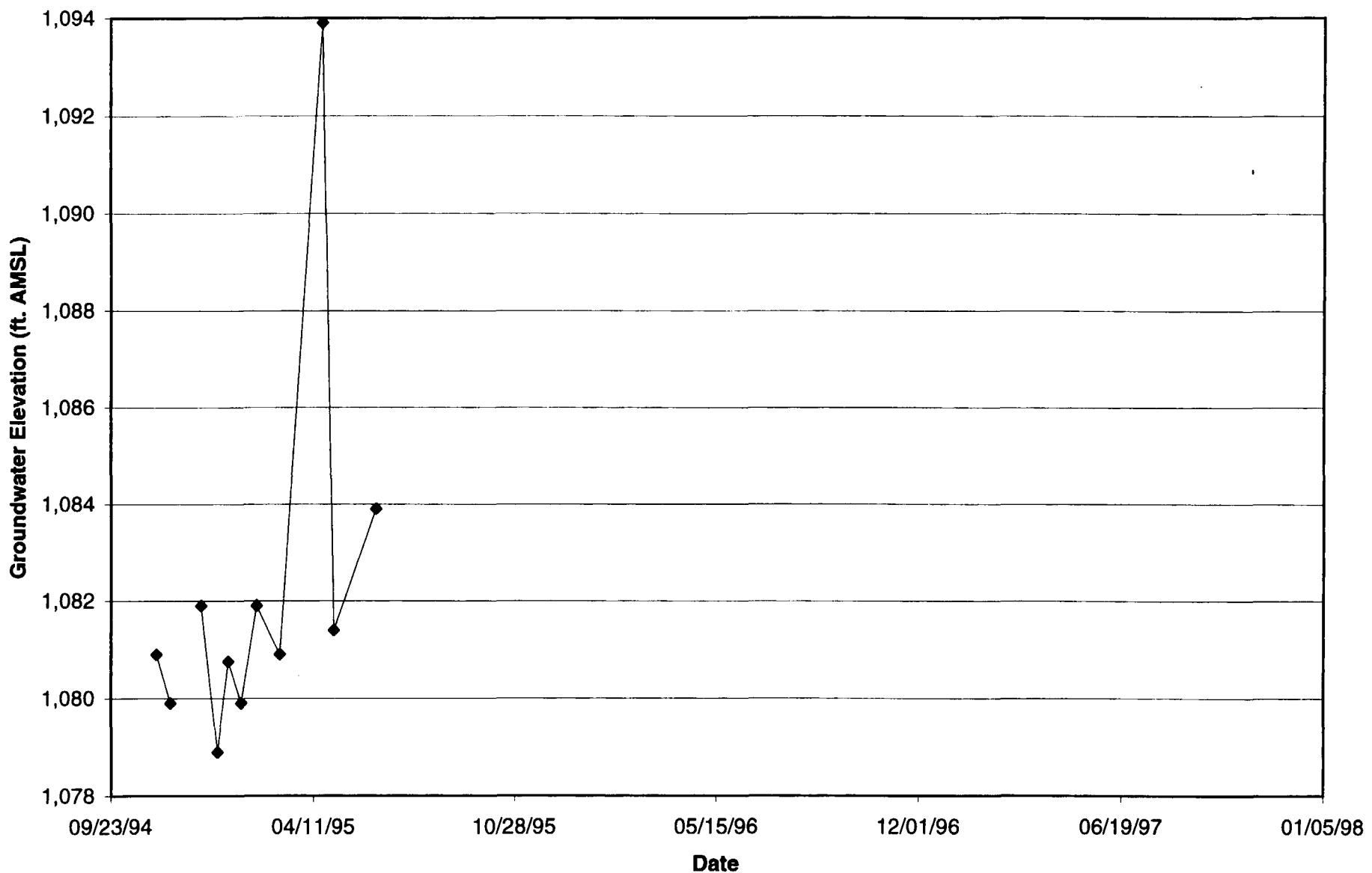


GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-102
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

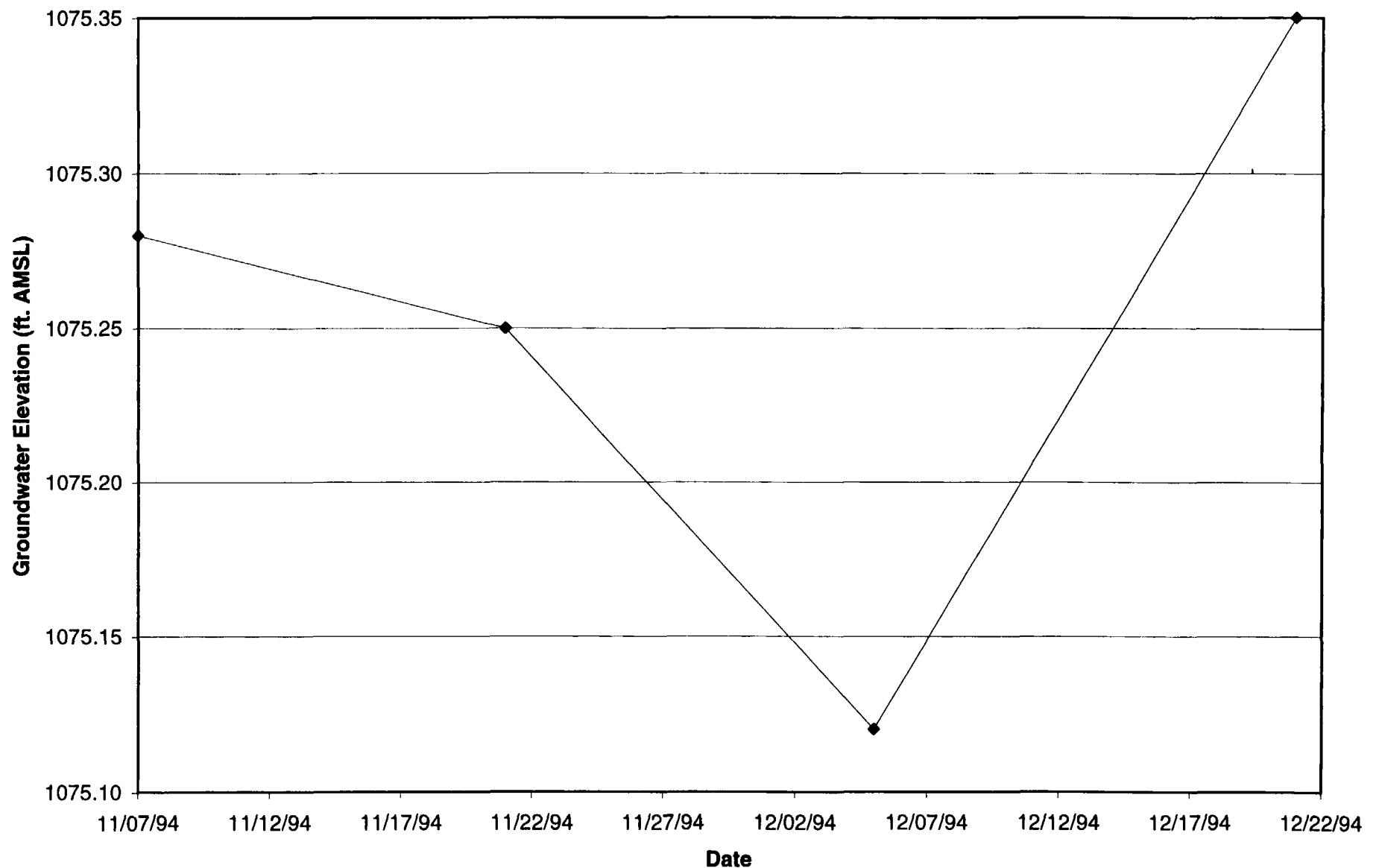


GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-103
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

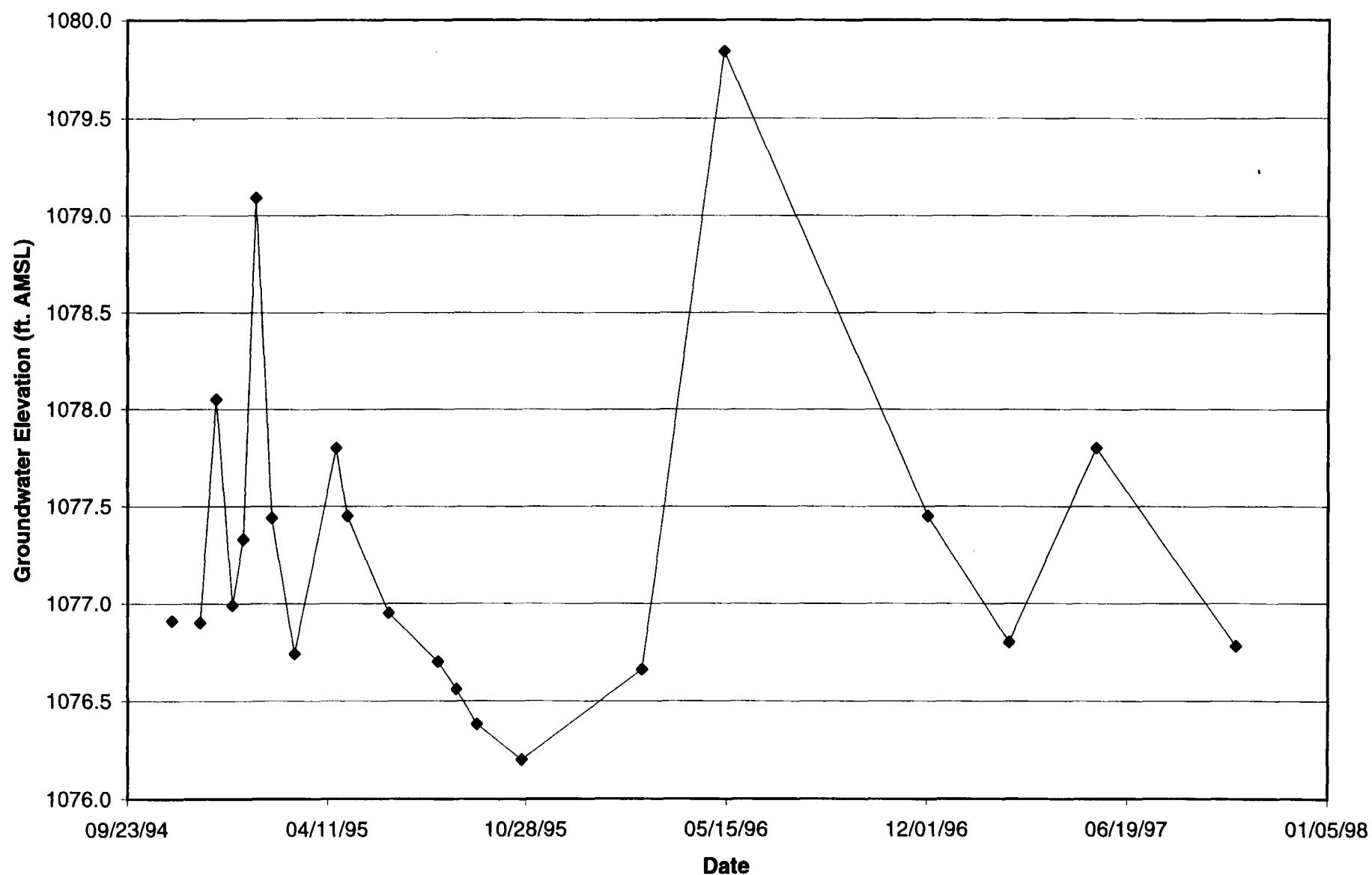




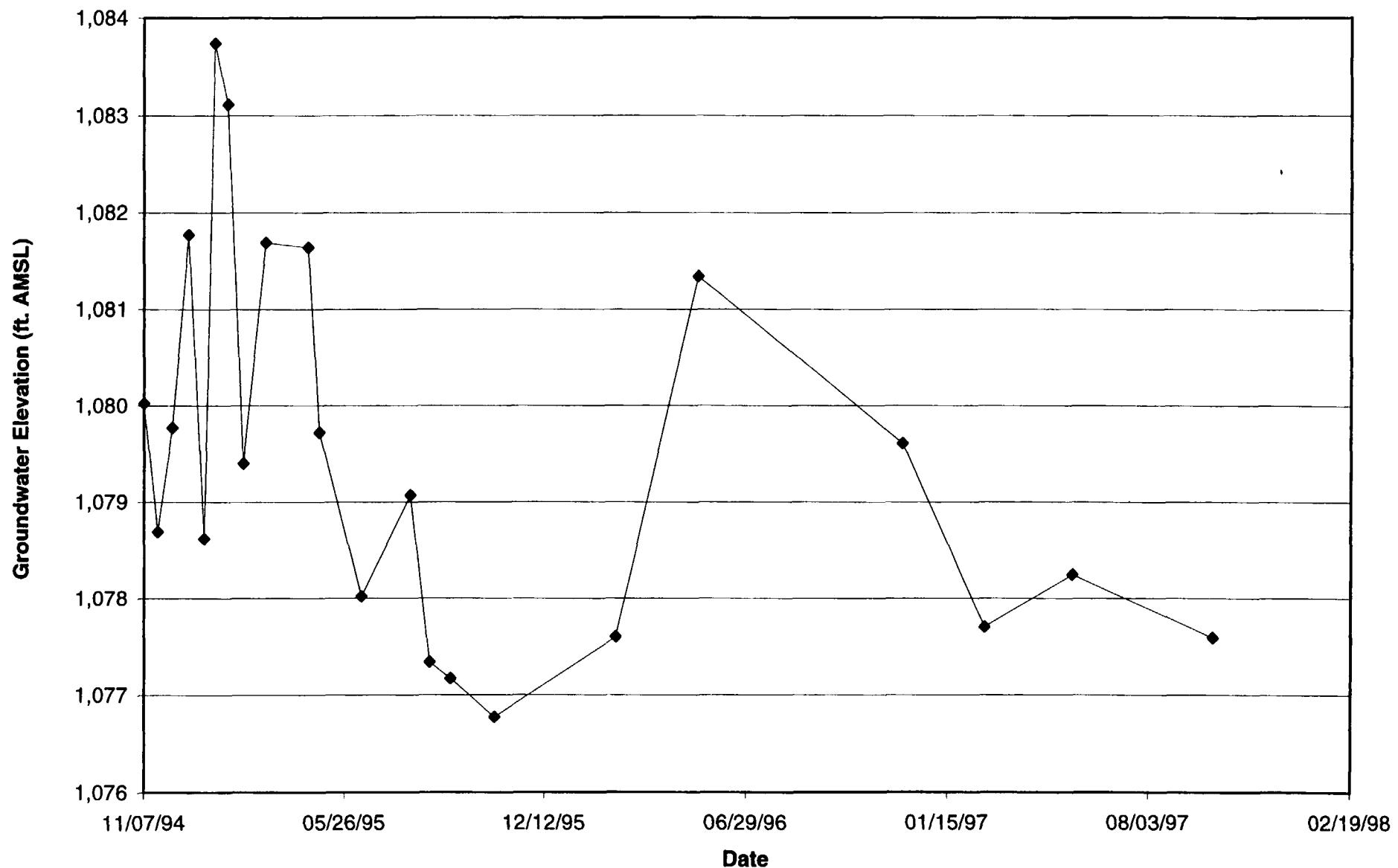
GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-104R
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

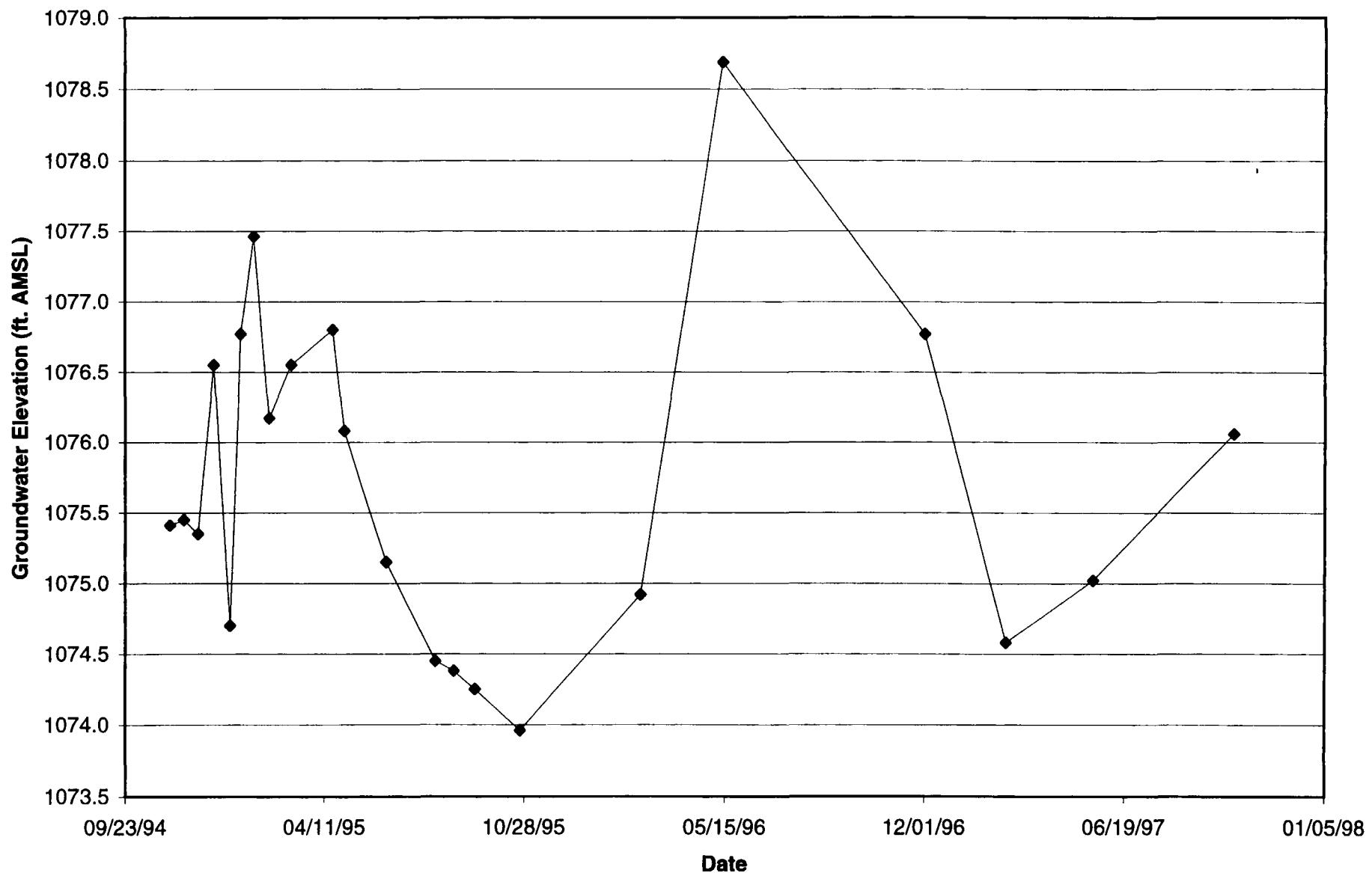


GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-105
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

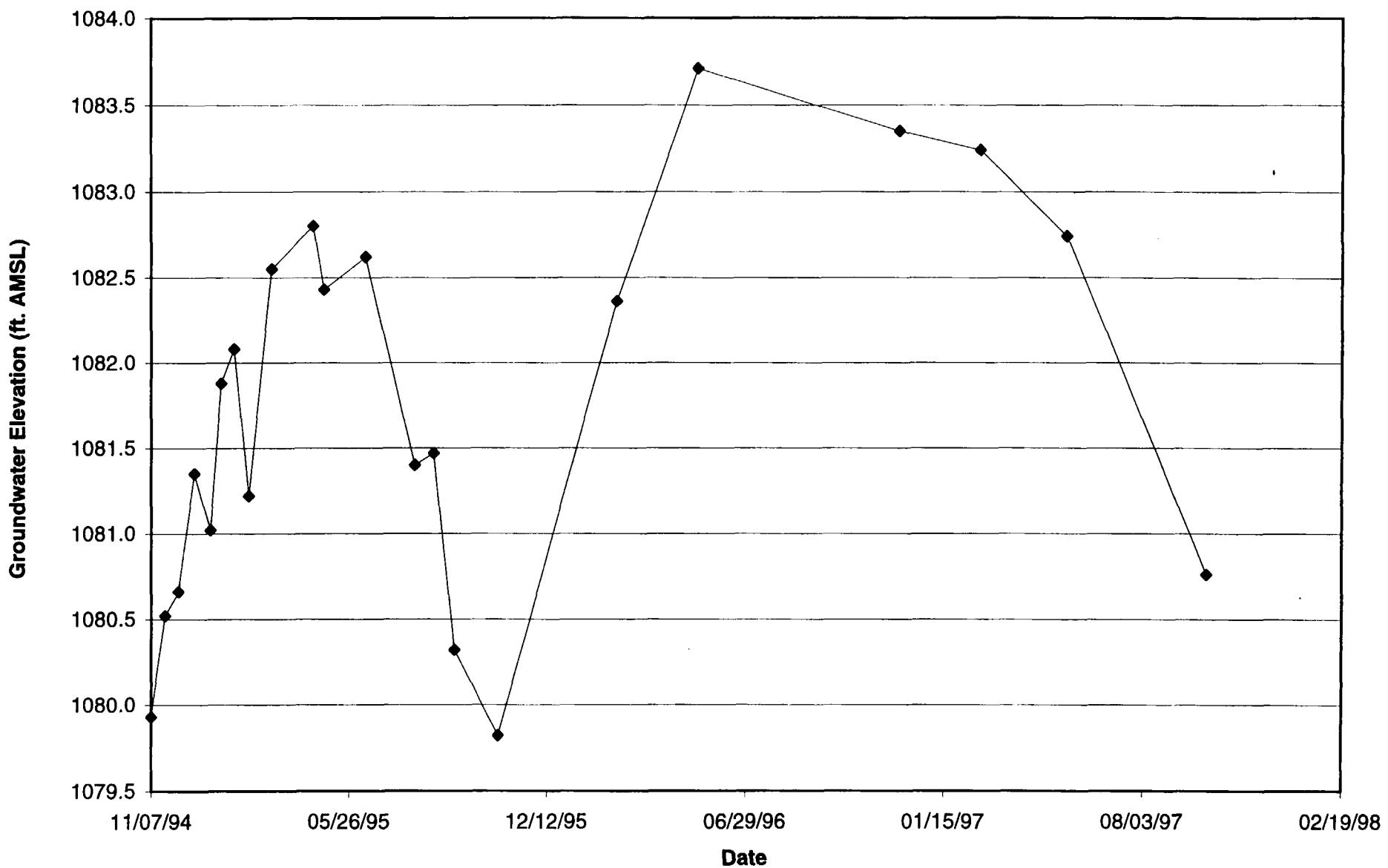


GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-106
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

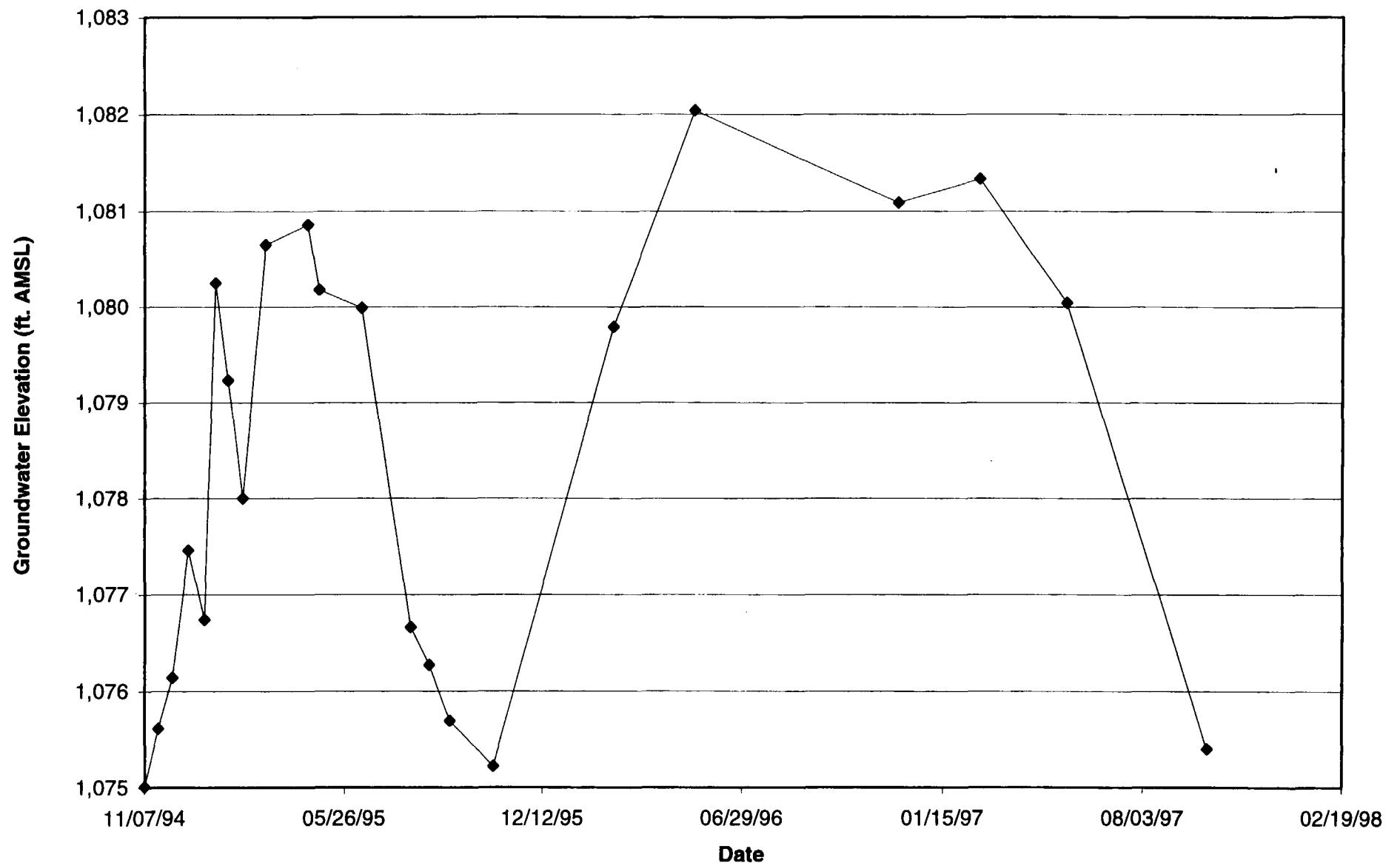




GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-108
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

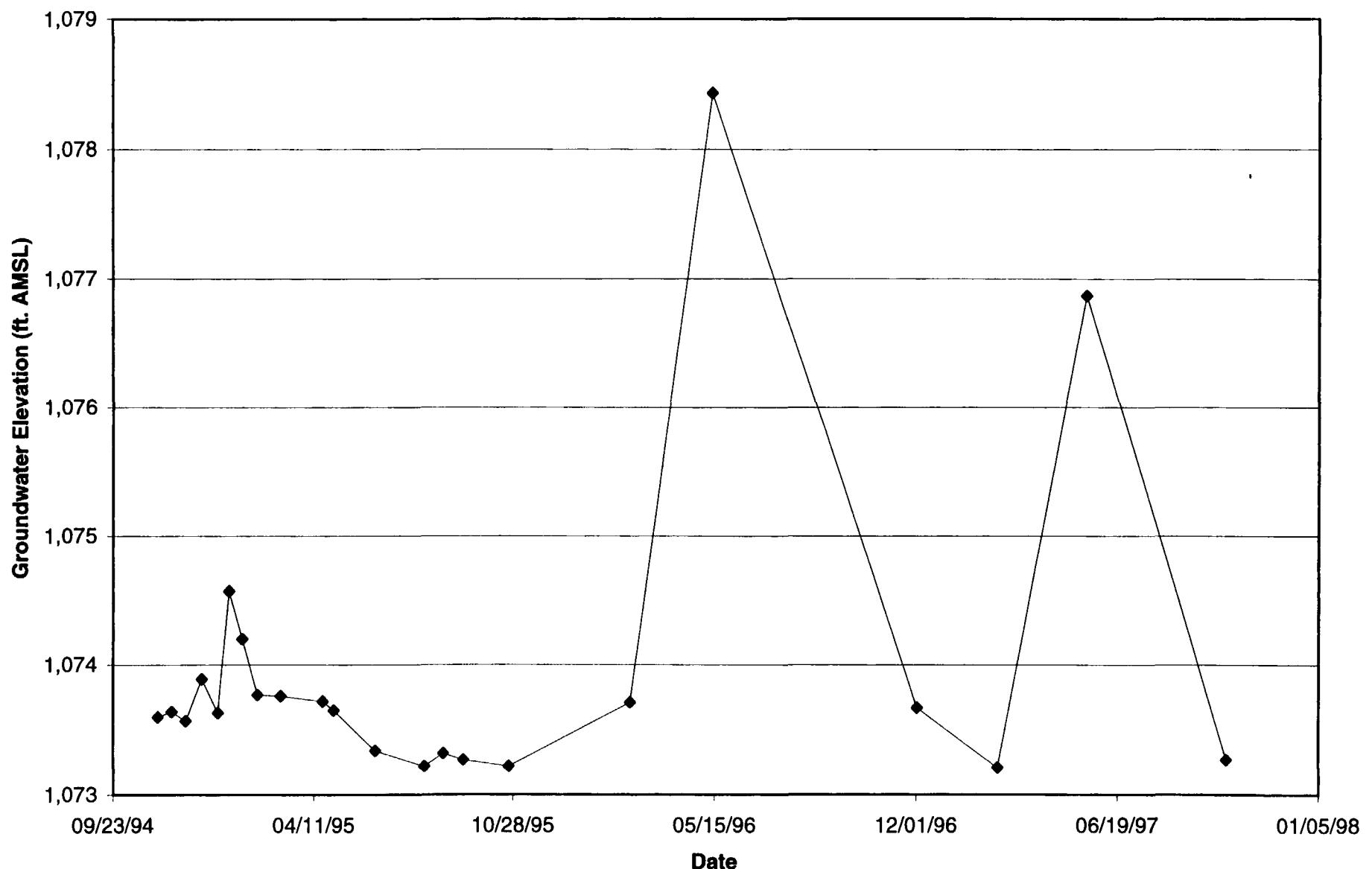


GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-109
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

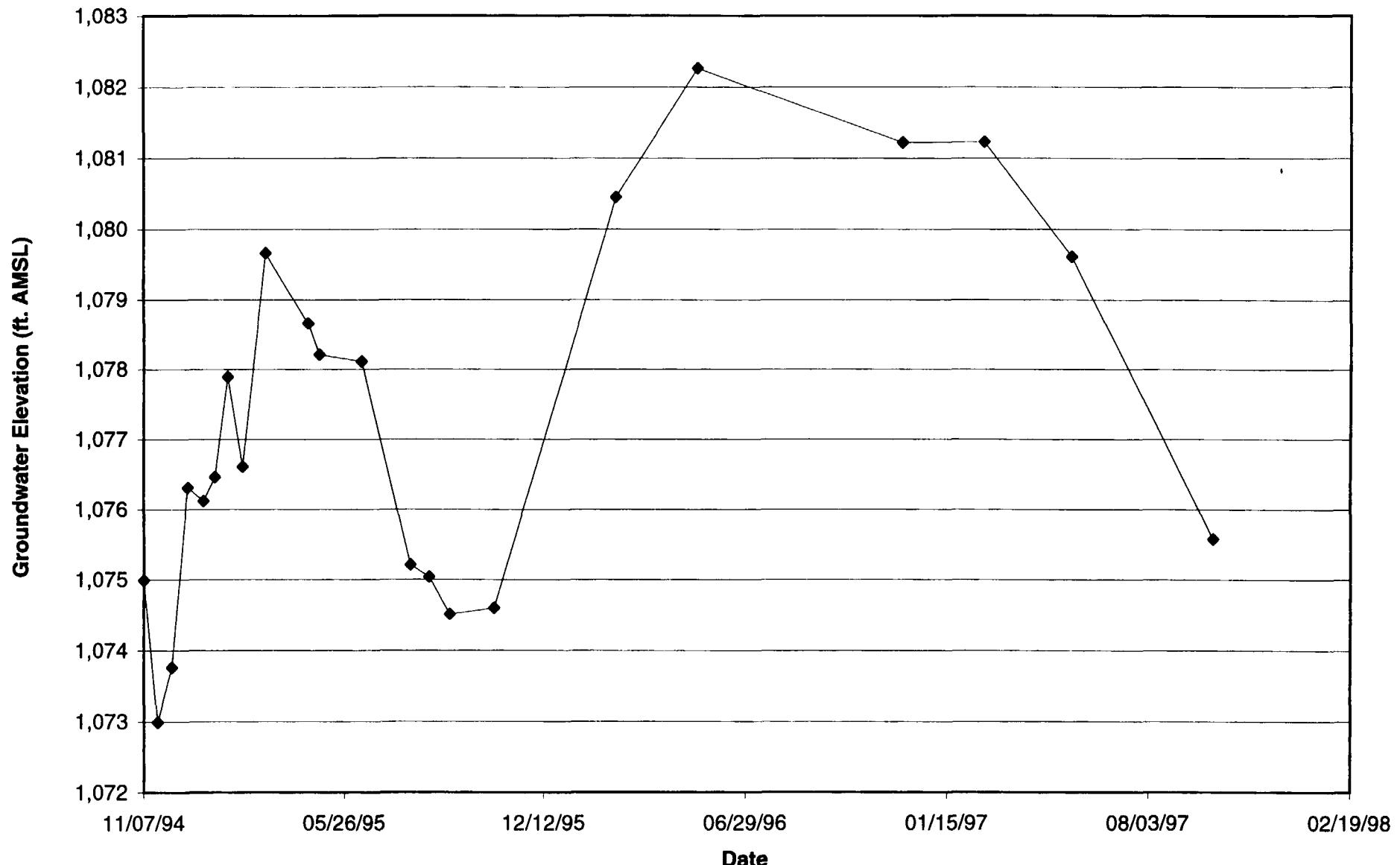


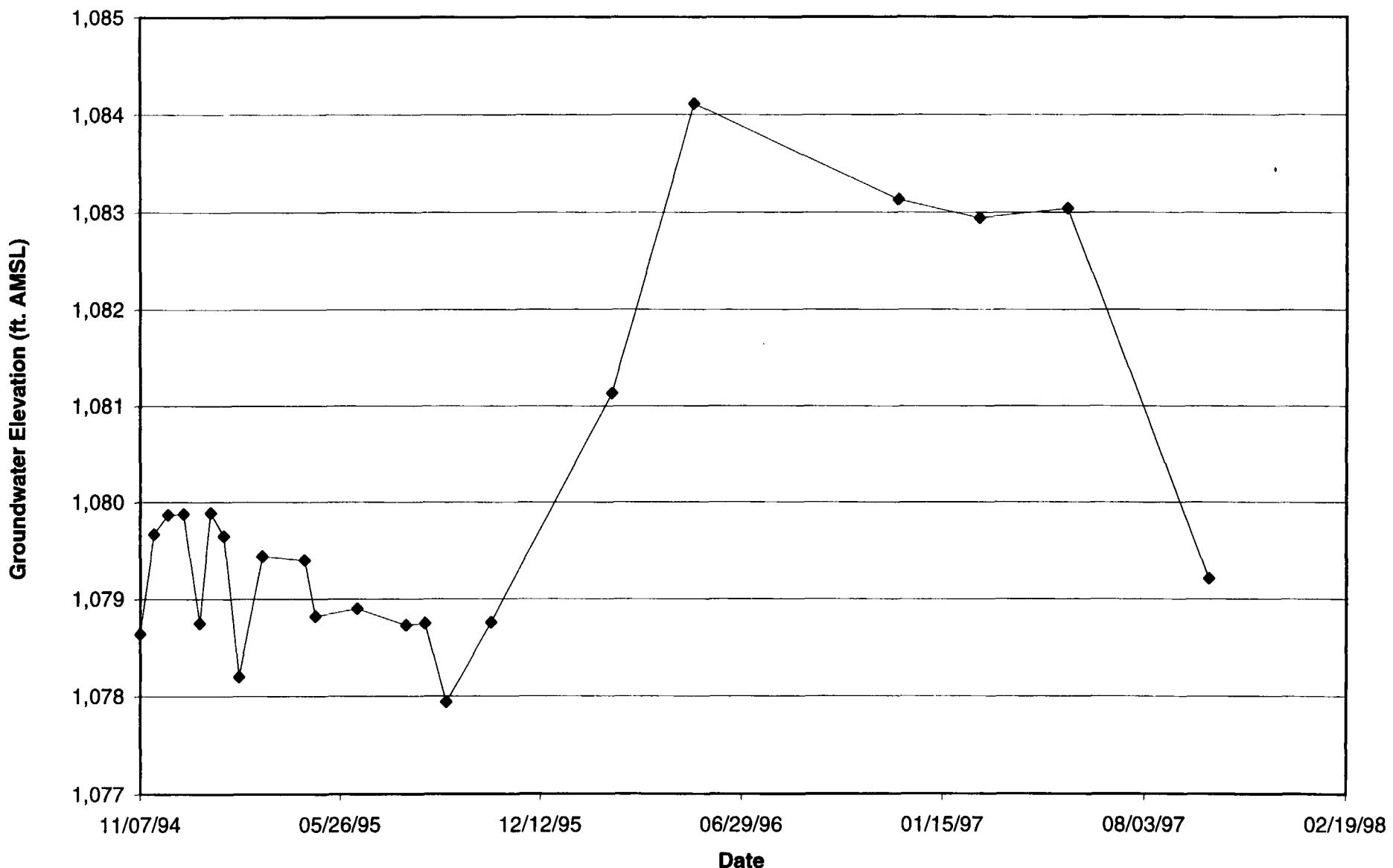
GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-110
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

CRA - 6029 (19/11/97)

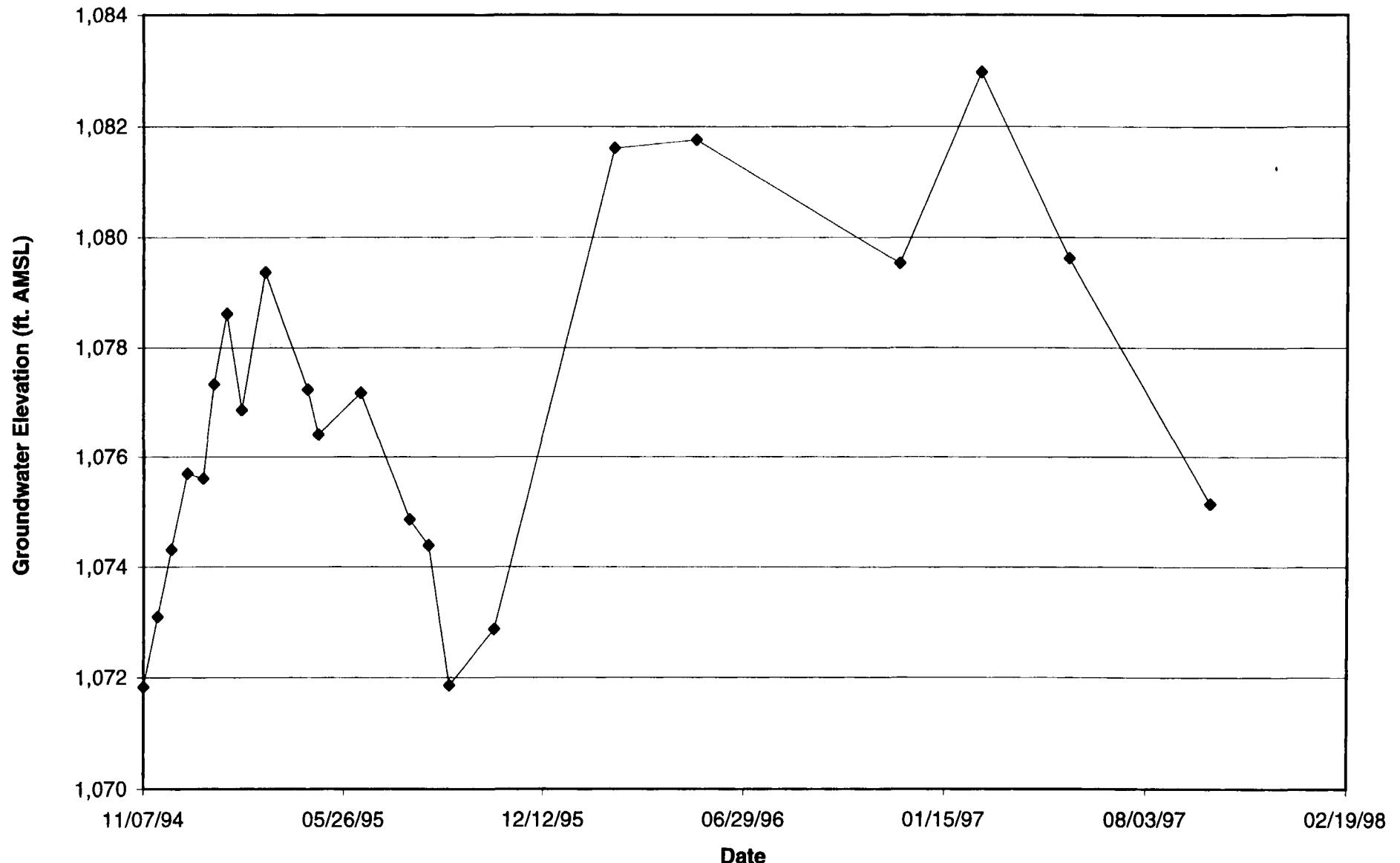


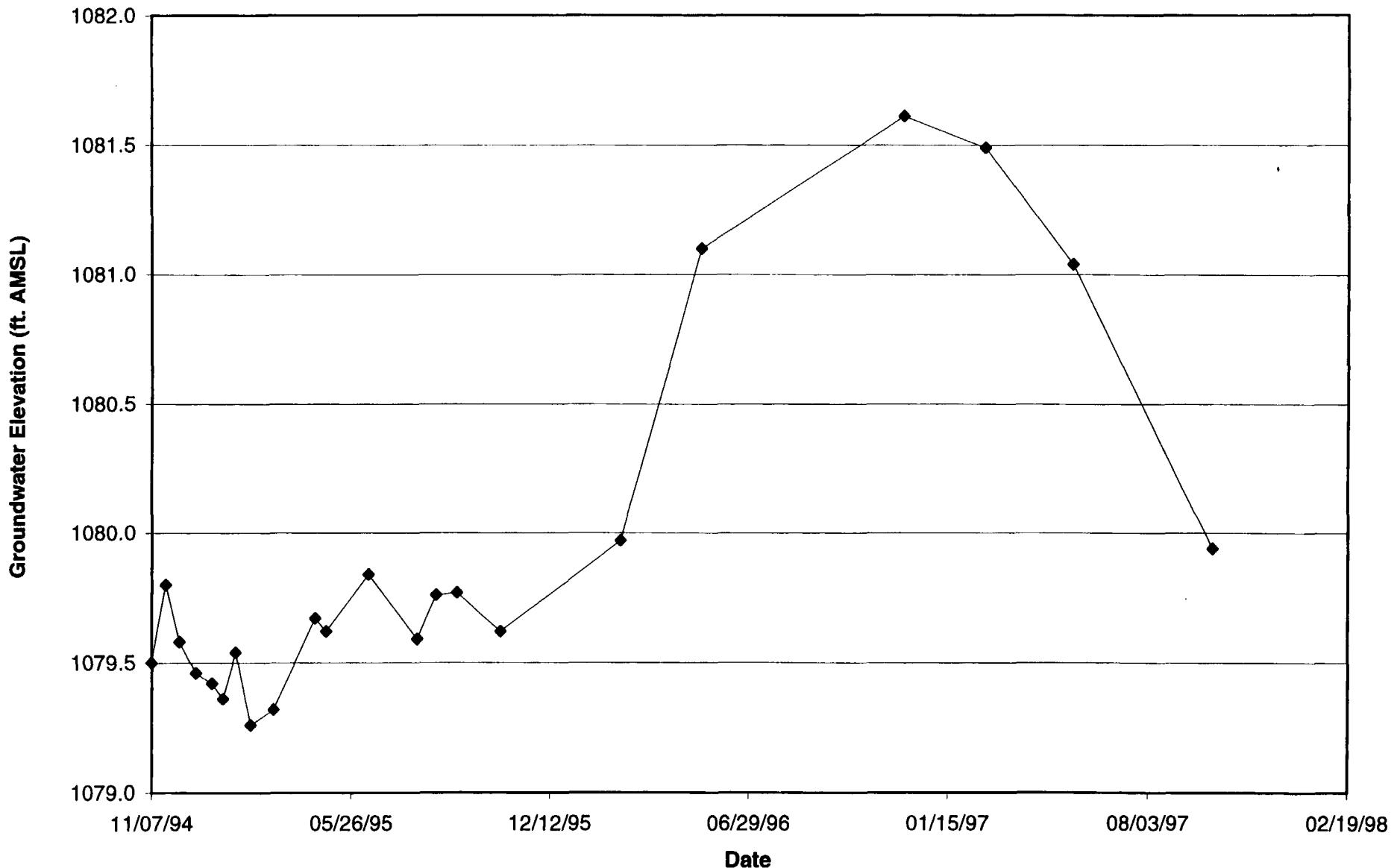
**GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-111
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**





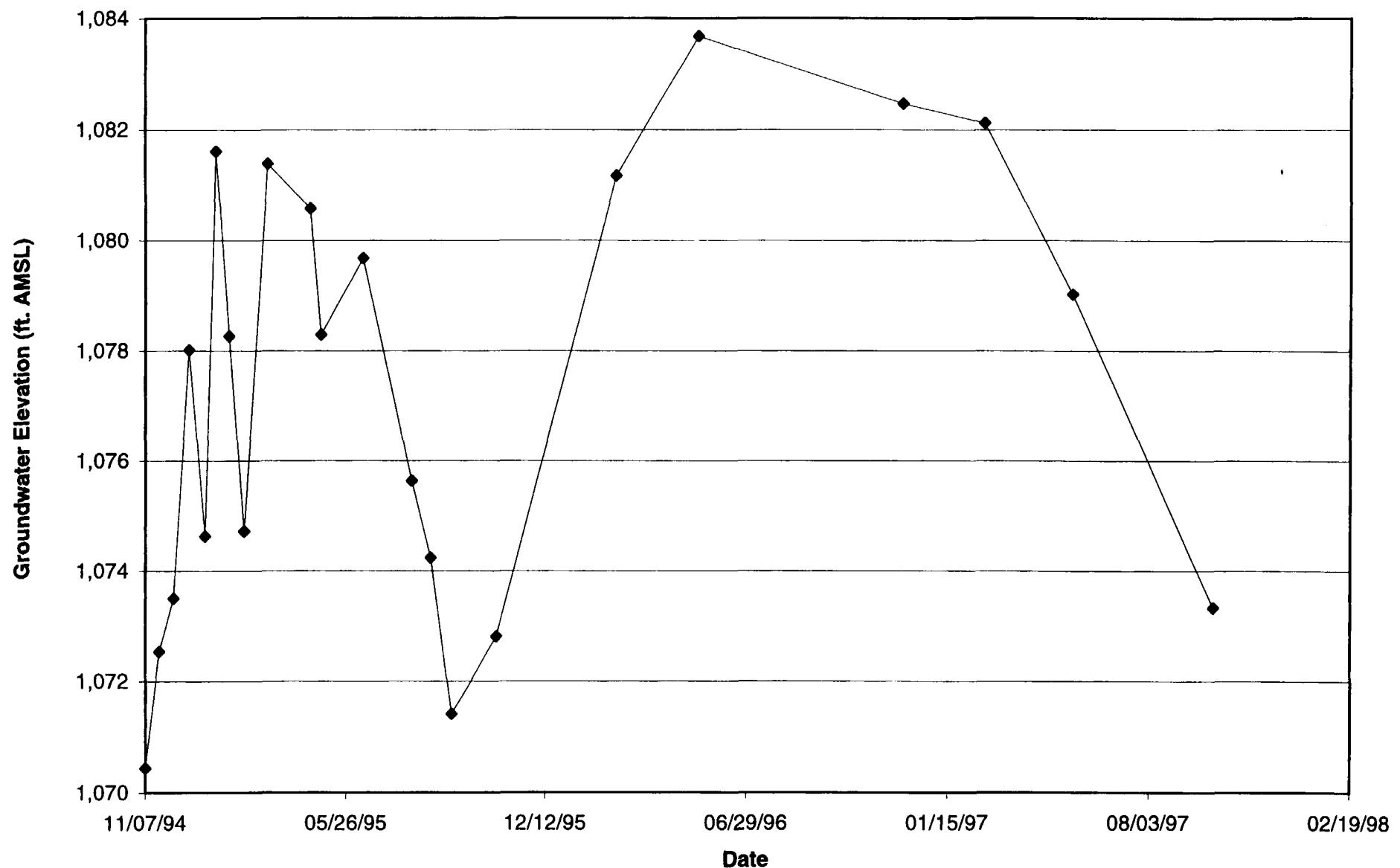
GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-114
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO



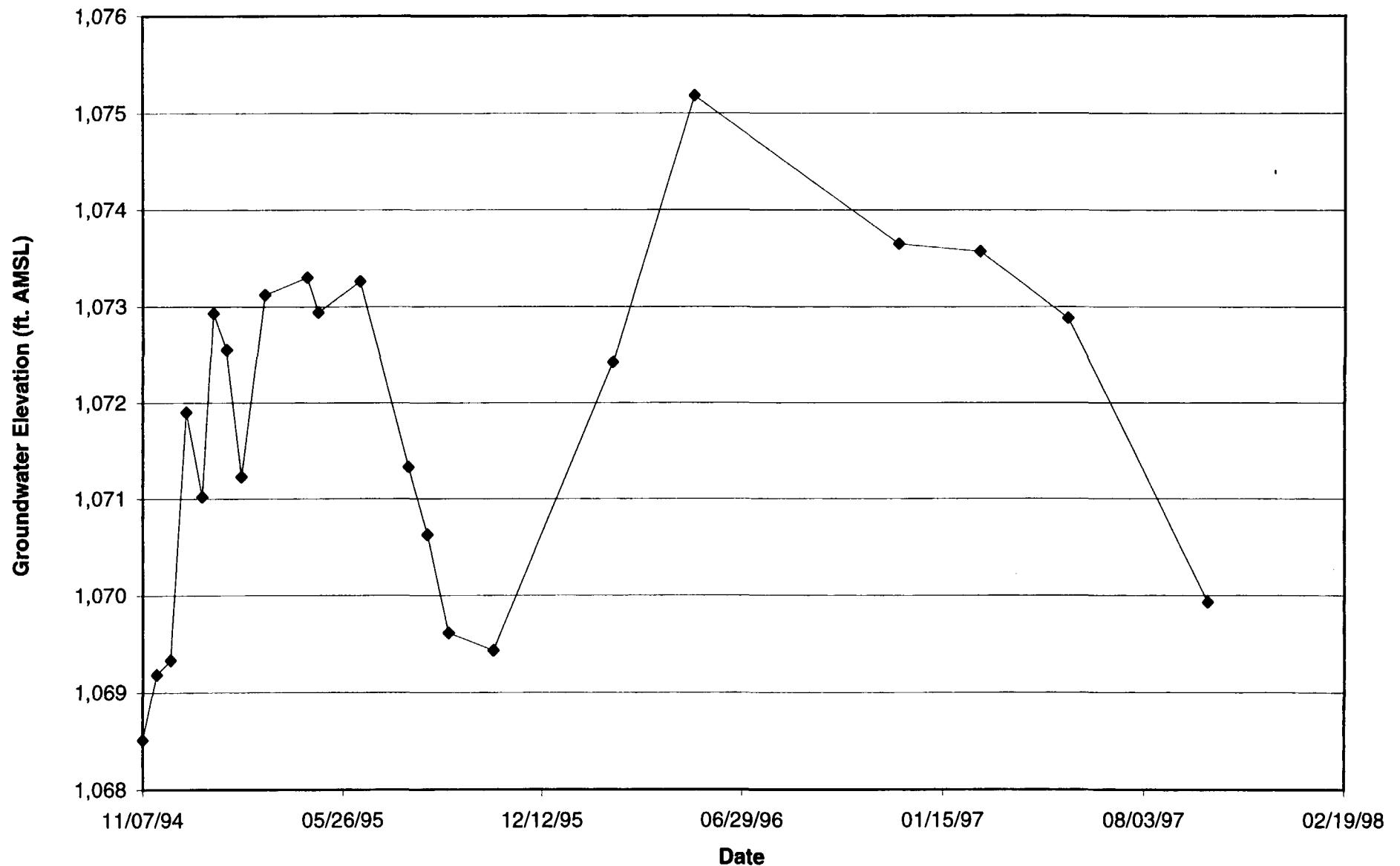


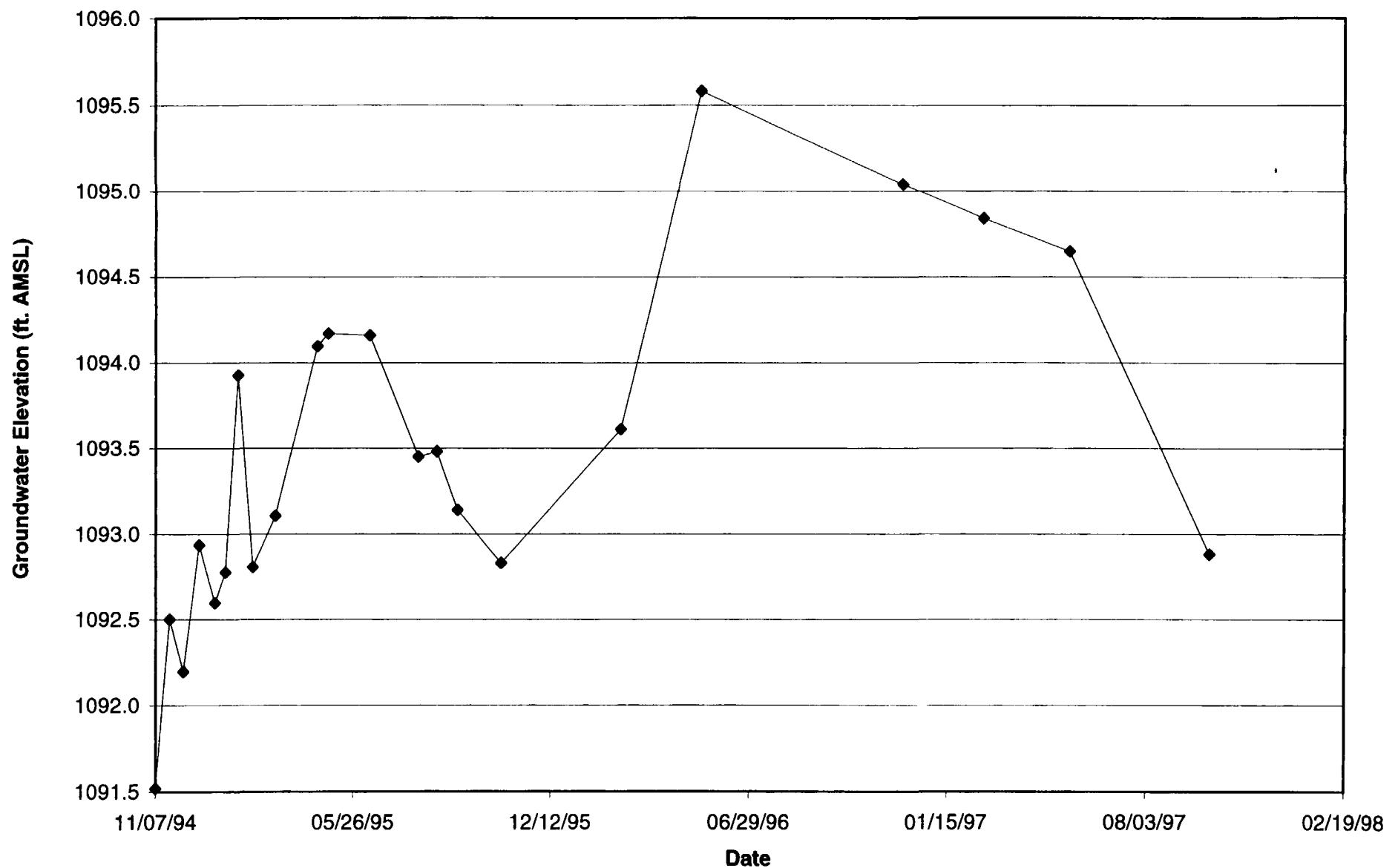
**GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-116
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

CRA - 6029 (19/11/97)

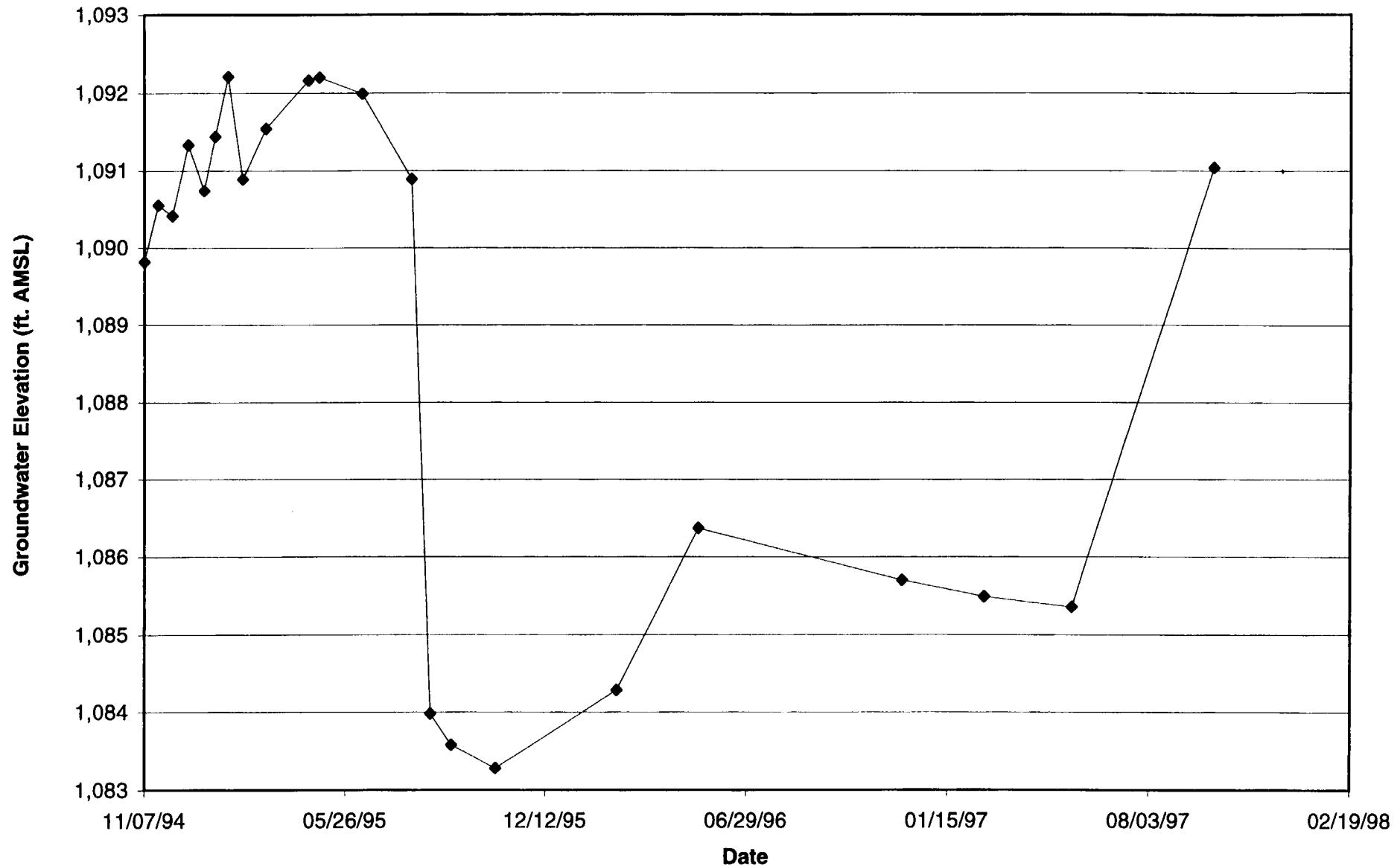


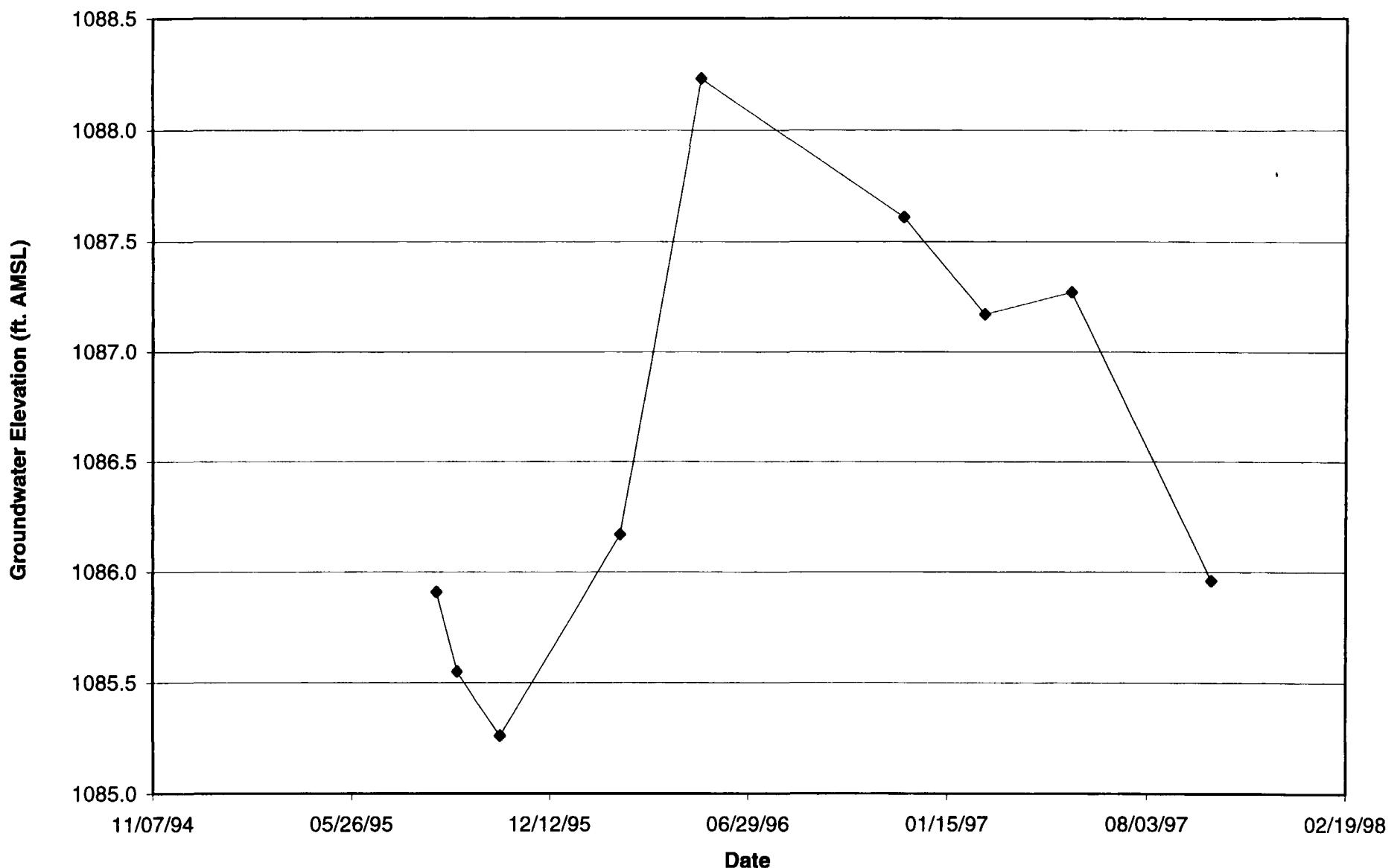
GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: MW-117
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO



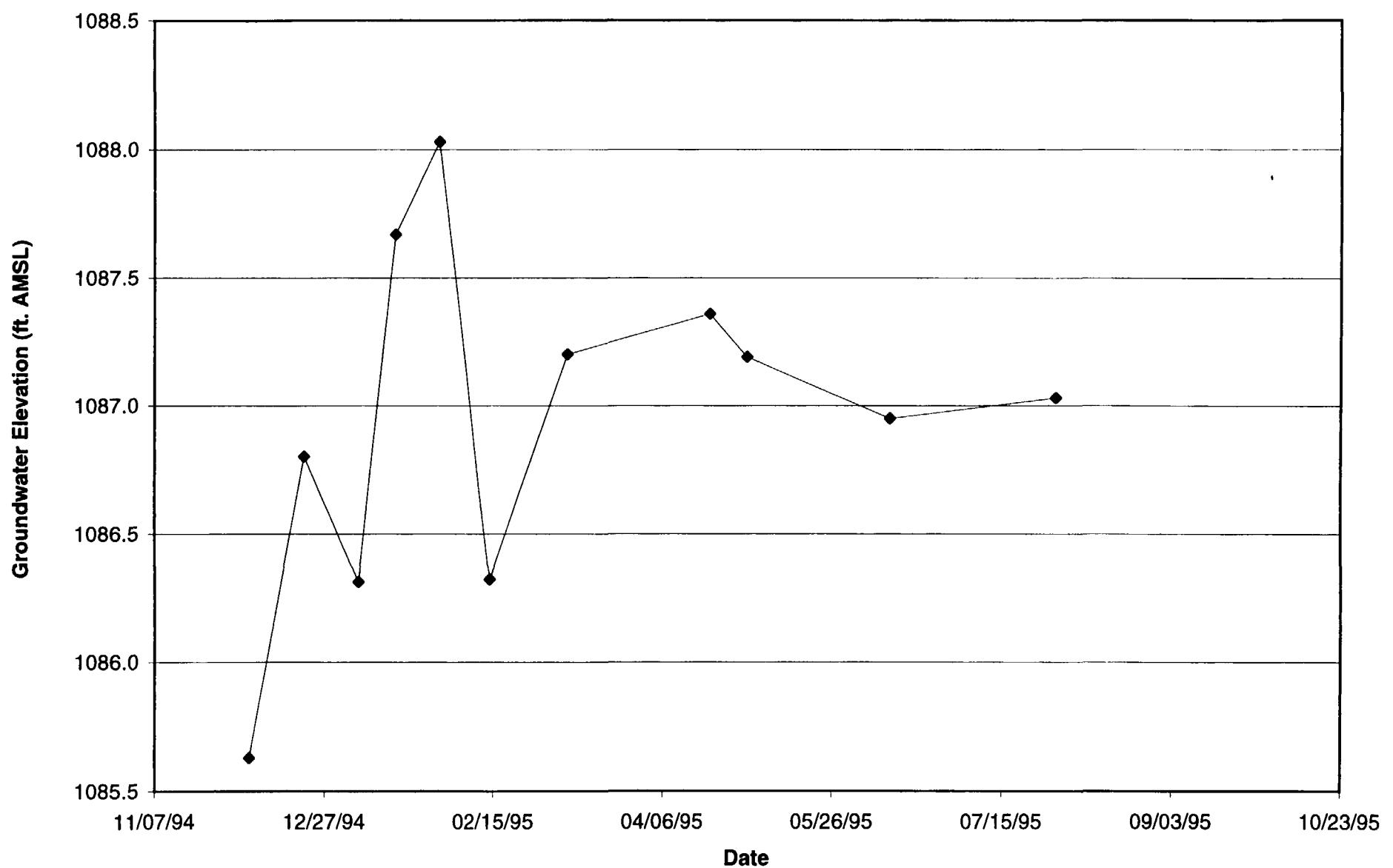


**GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: PZ-1
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

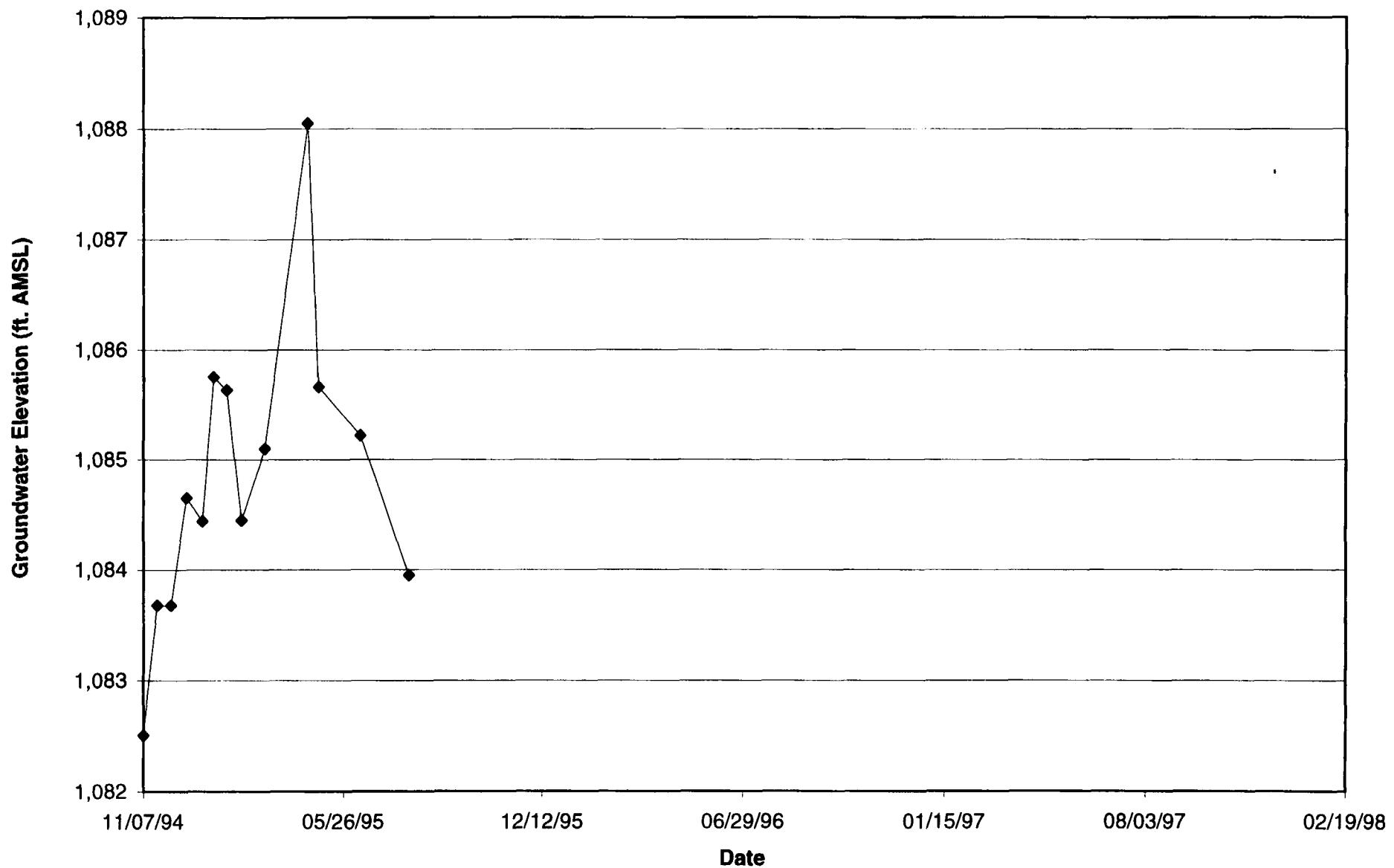




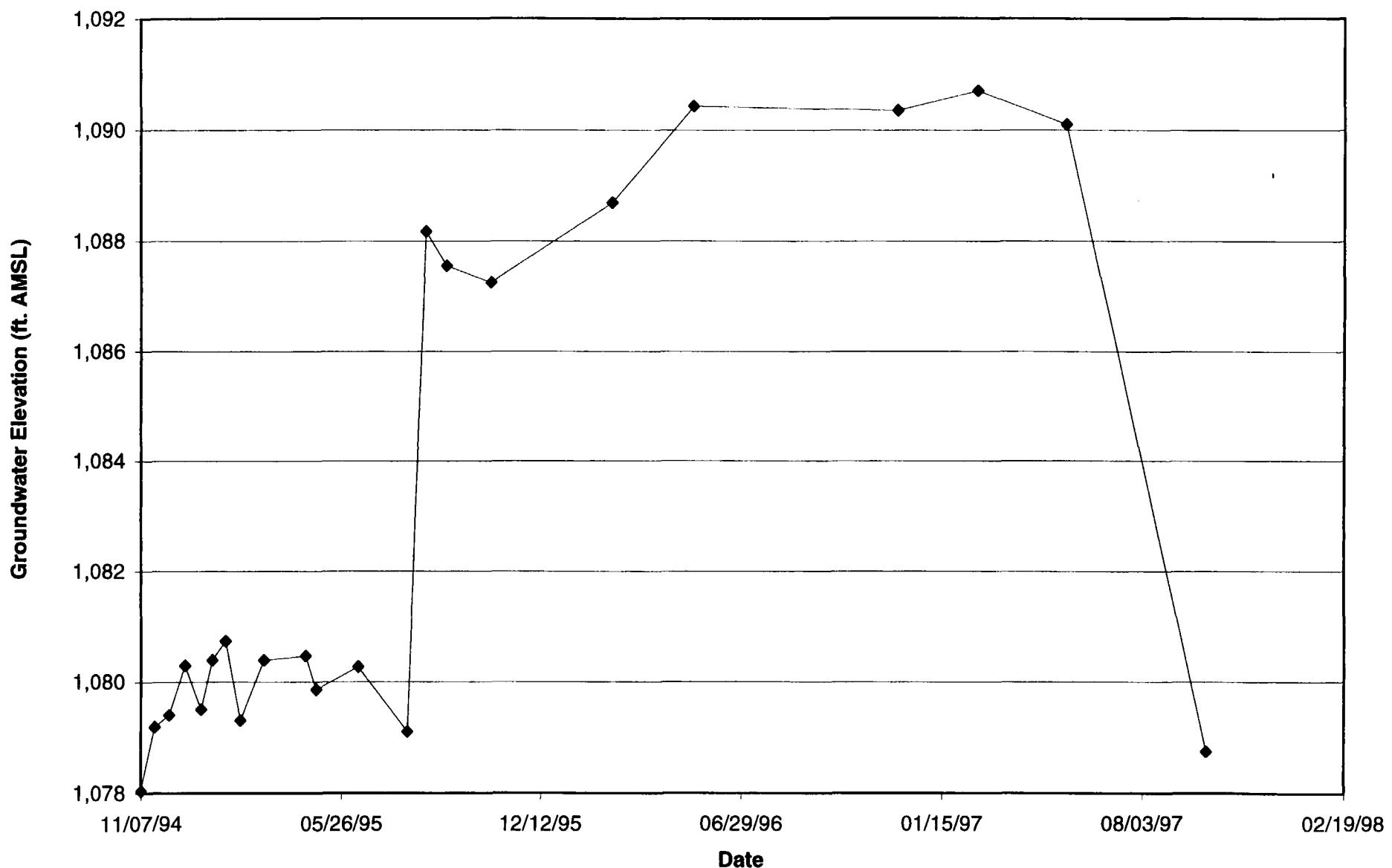
**GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: PZ-102
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

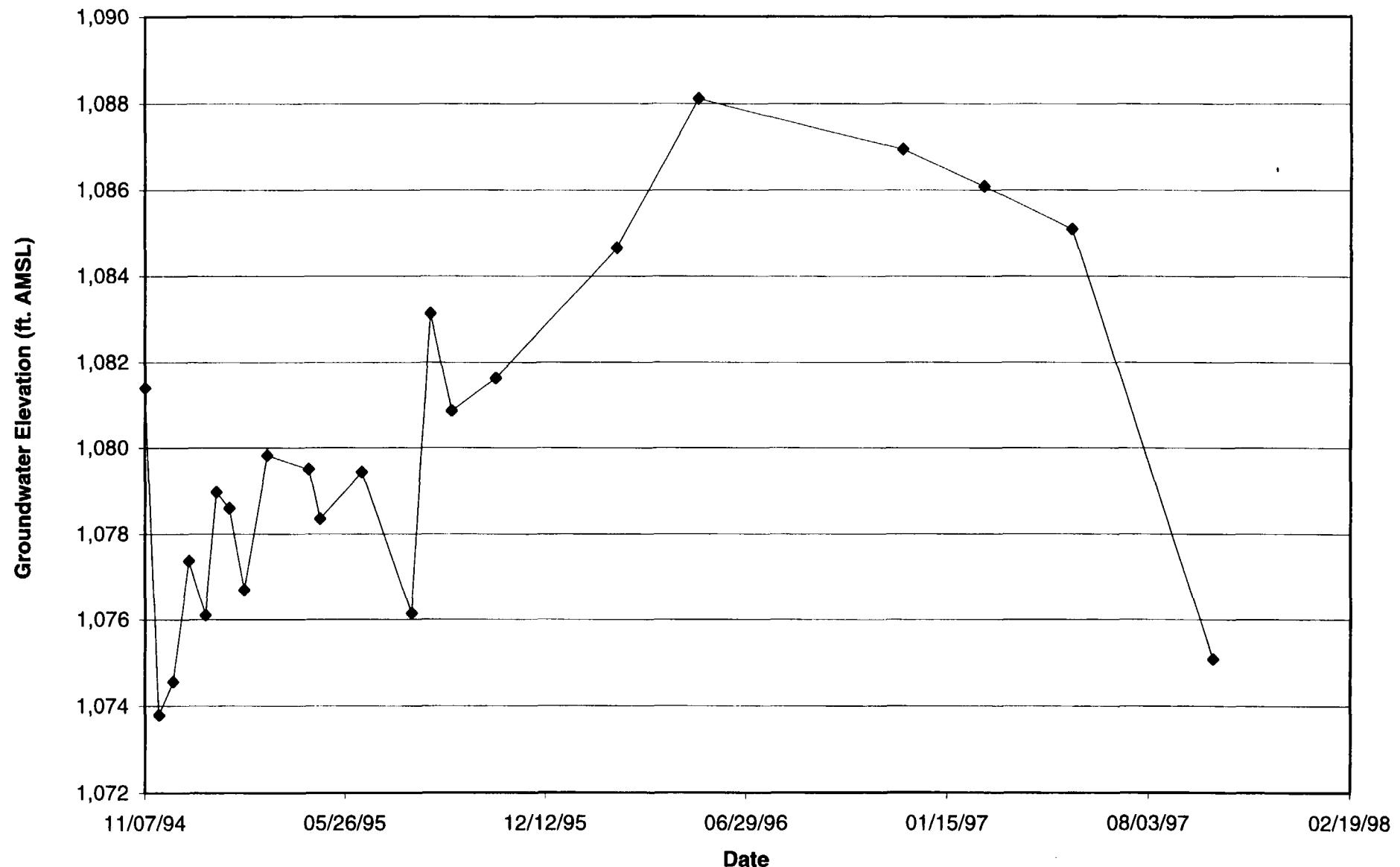


GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: PZ-102R
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

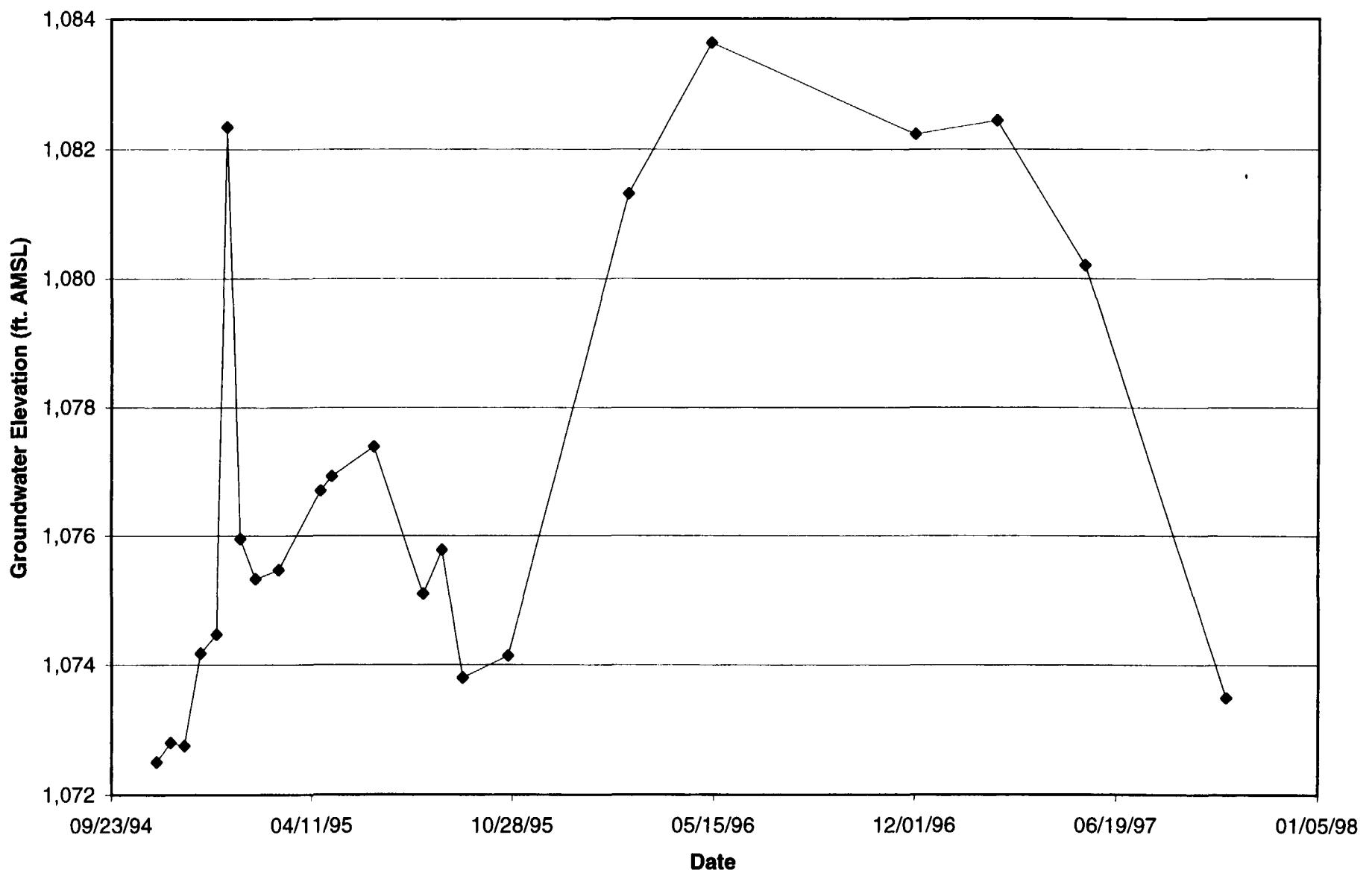


**GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: PZ-103
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

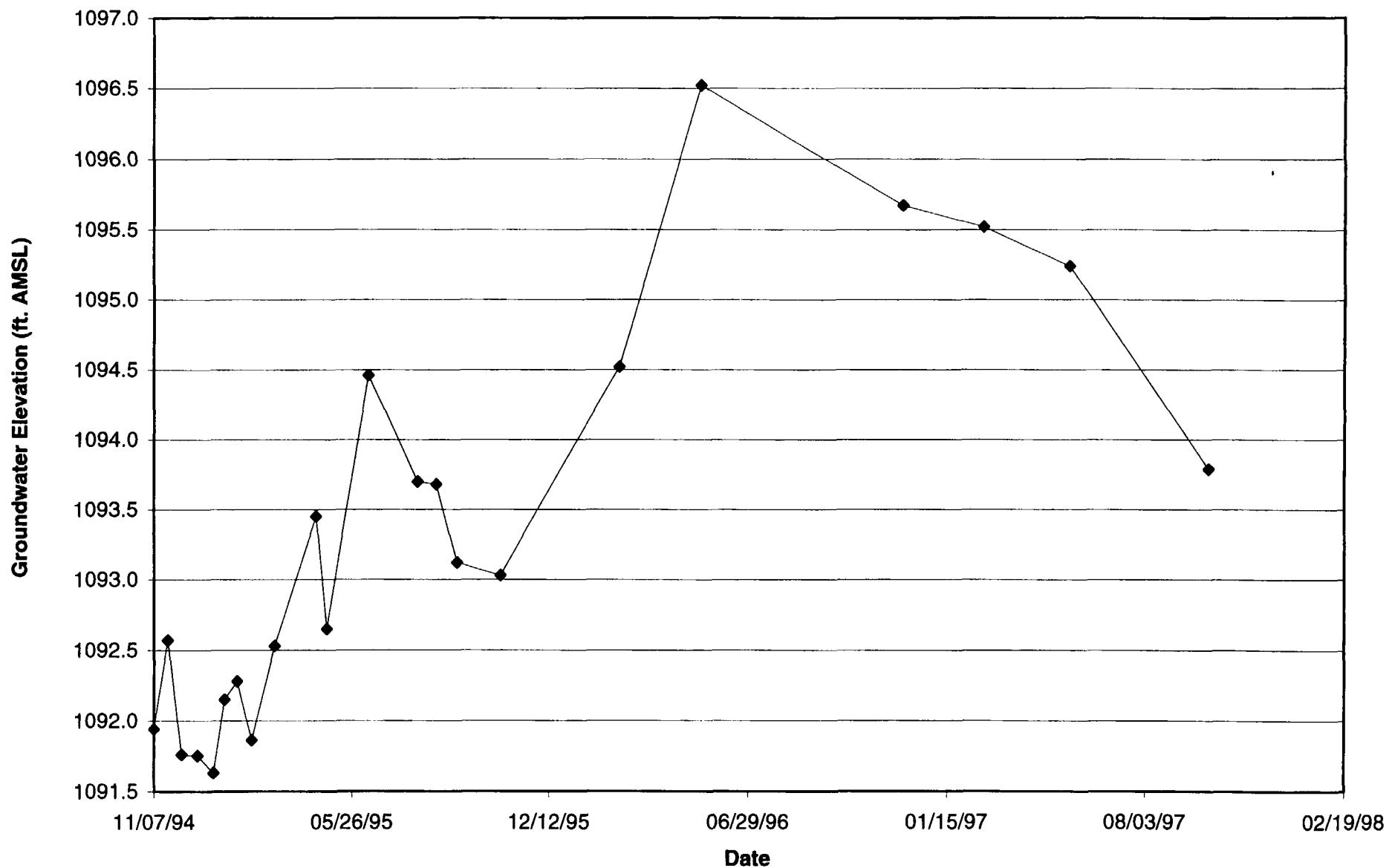




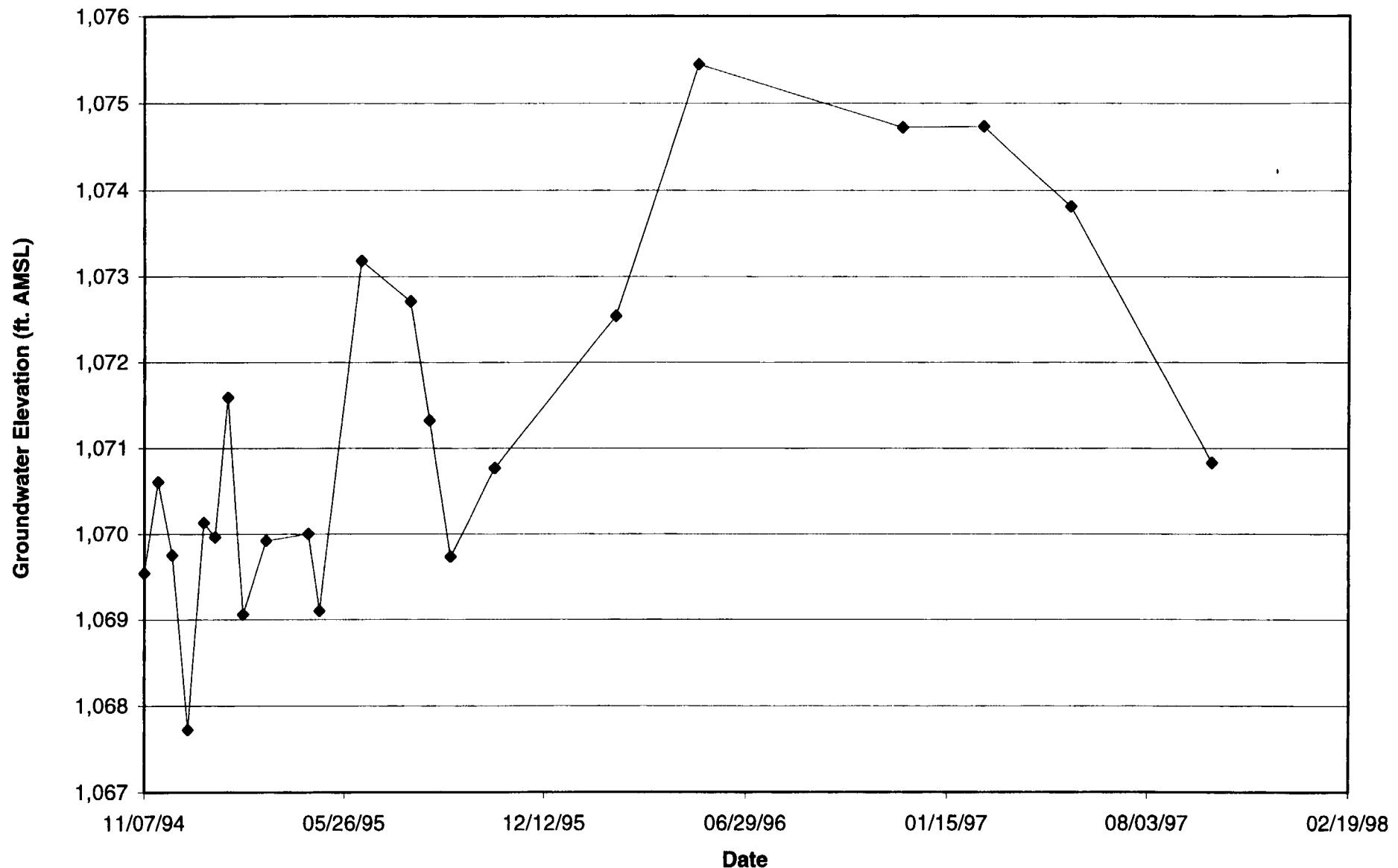
GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: PZ-105
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO



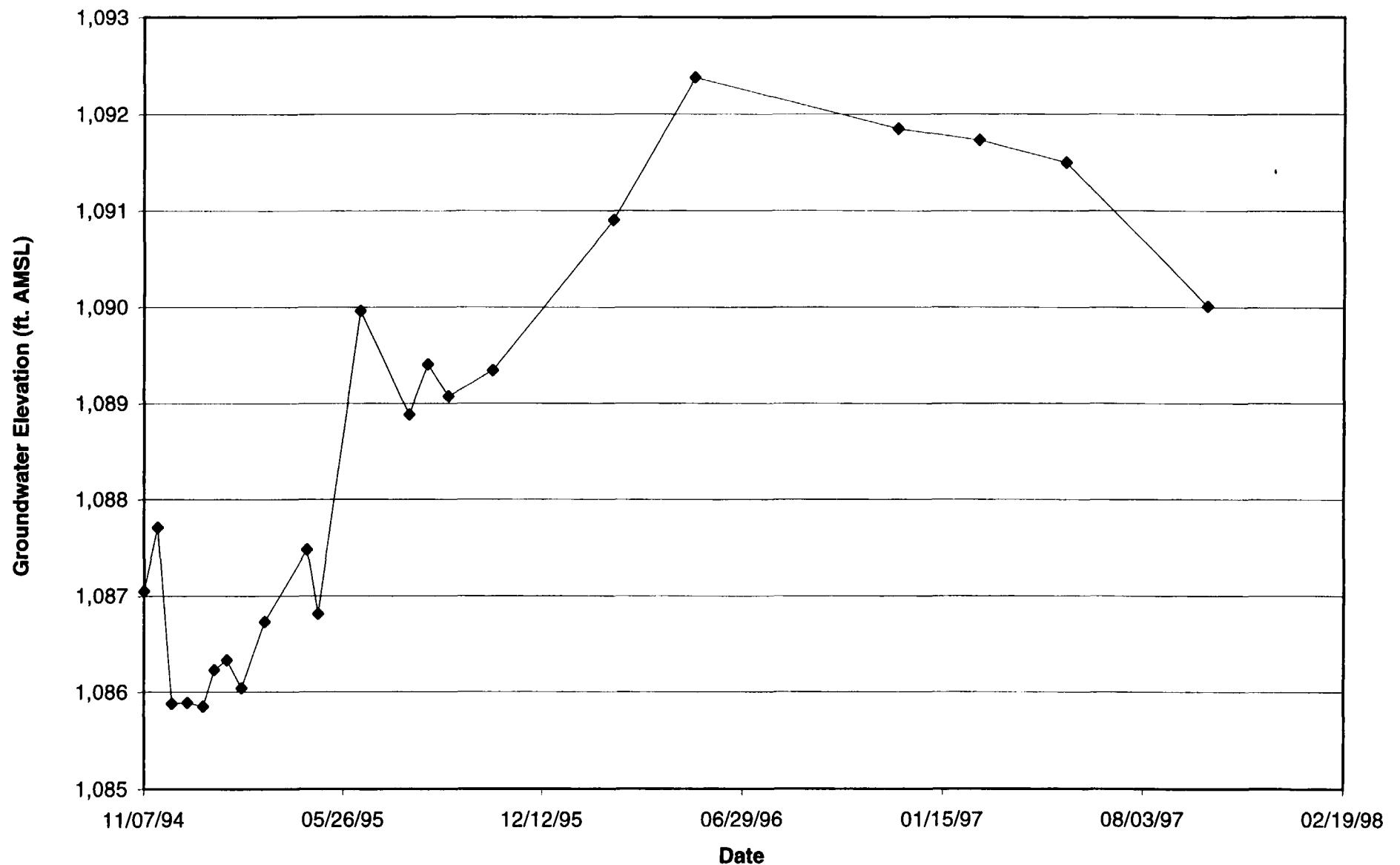
**GROUNDWATER HYDROGRAPH
WATER TABLE UNIT: PZ-106
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

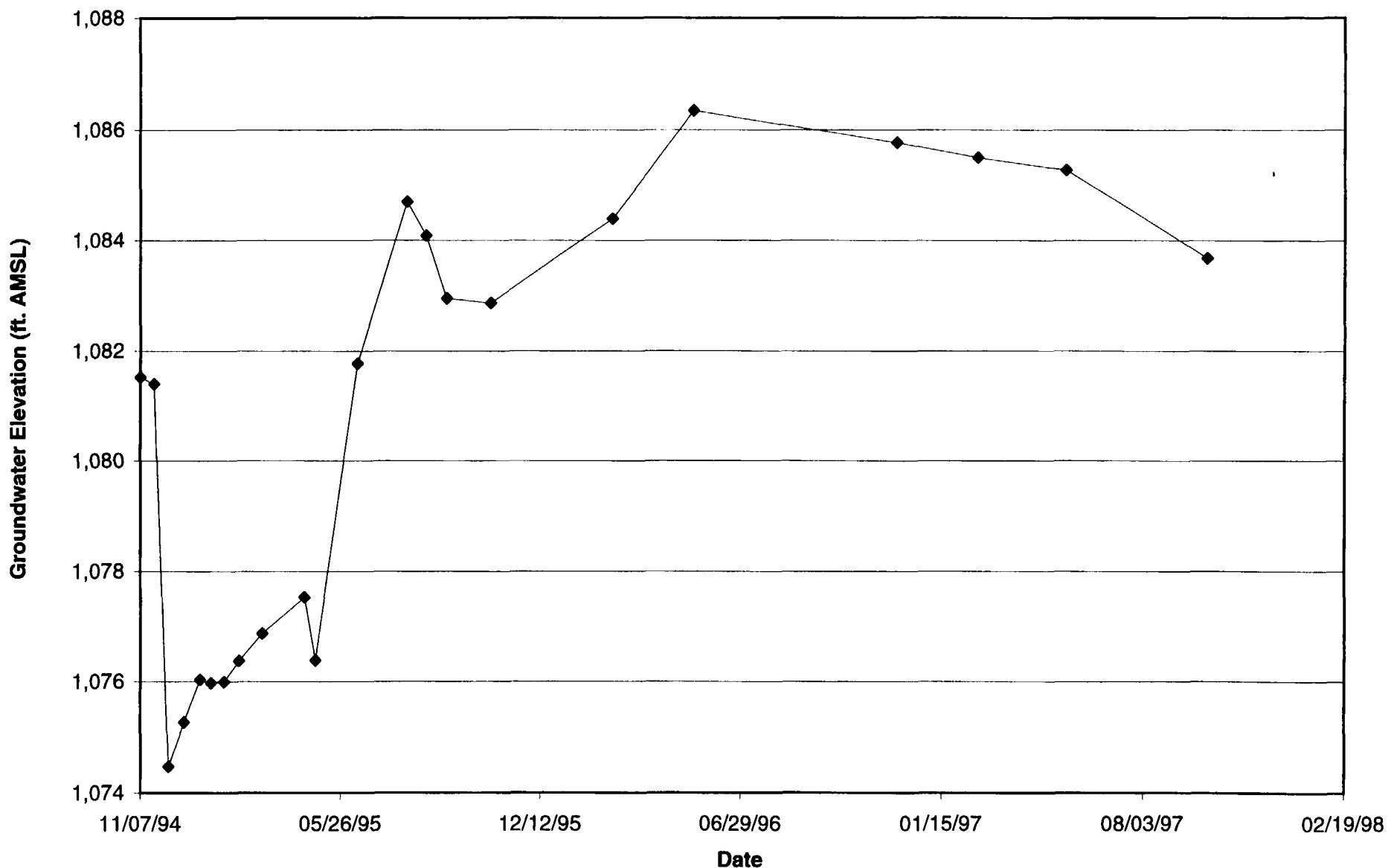


**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-201
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

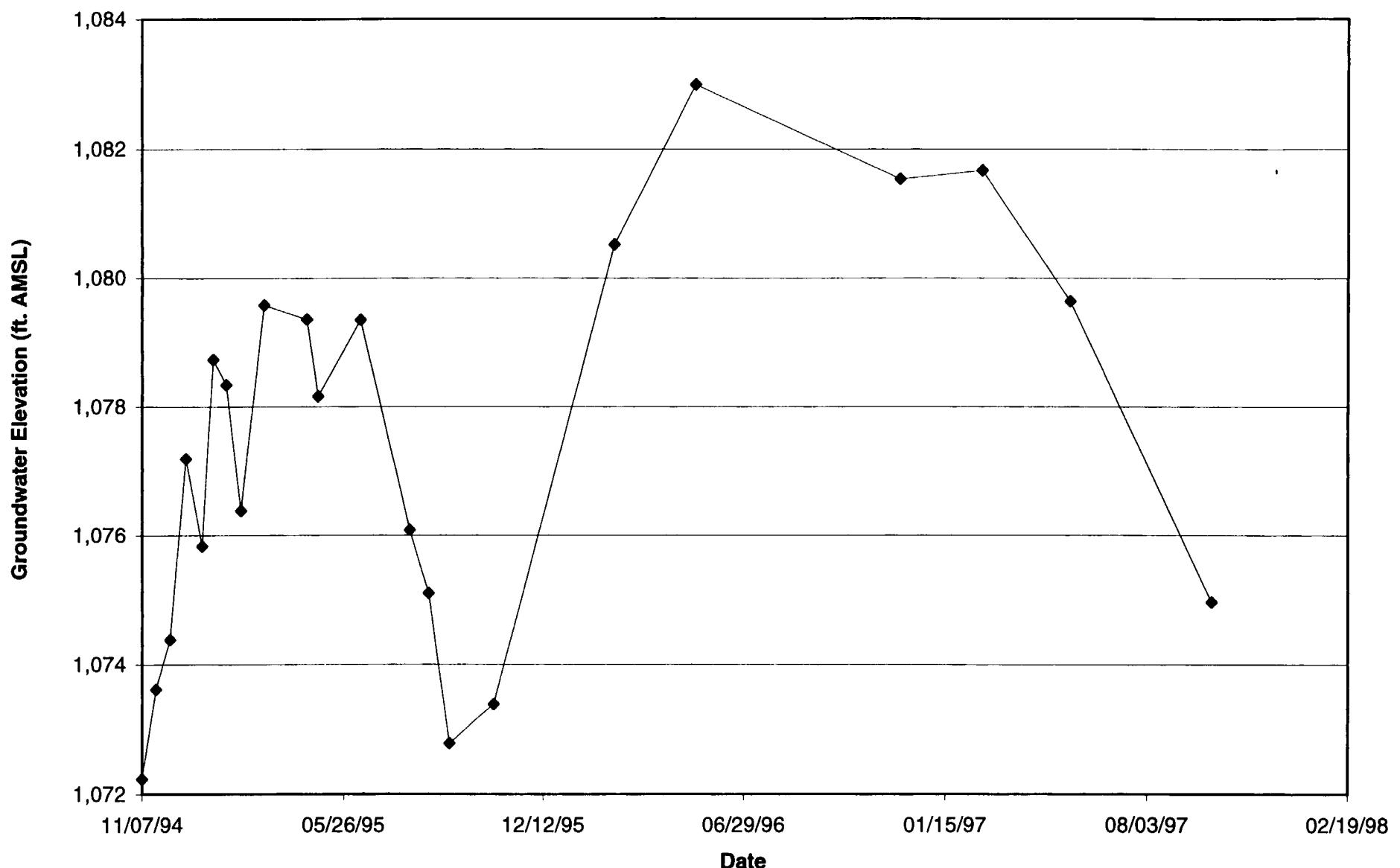


**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-202
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

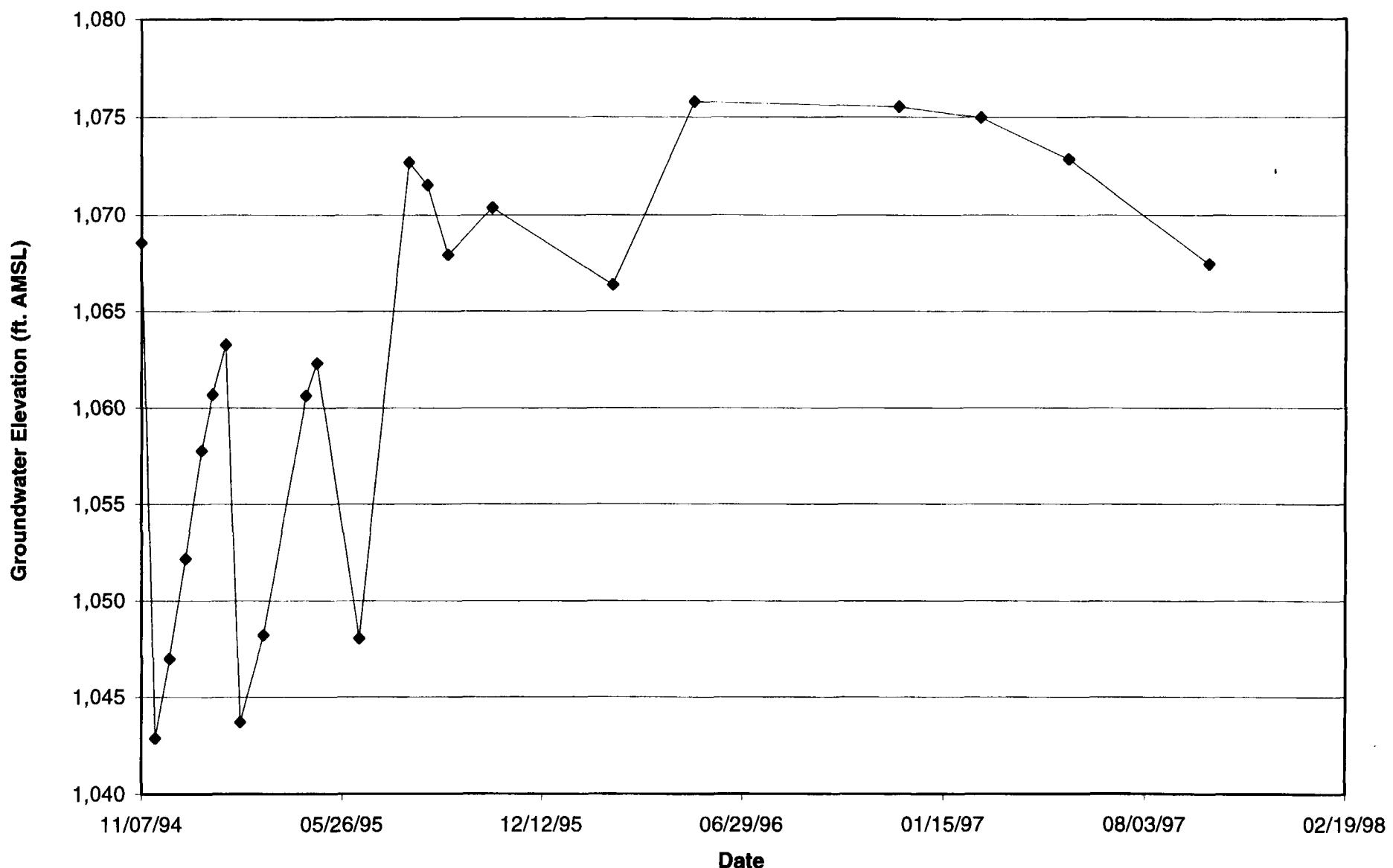


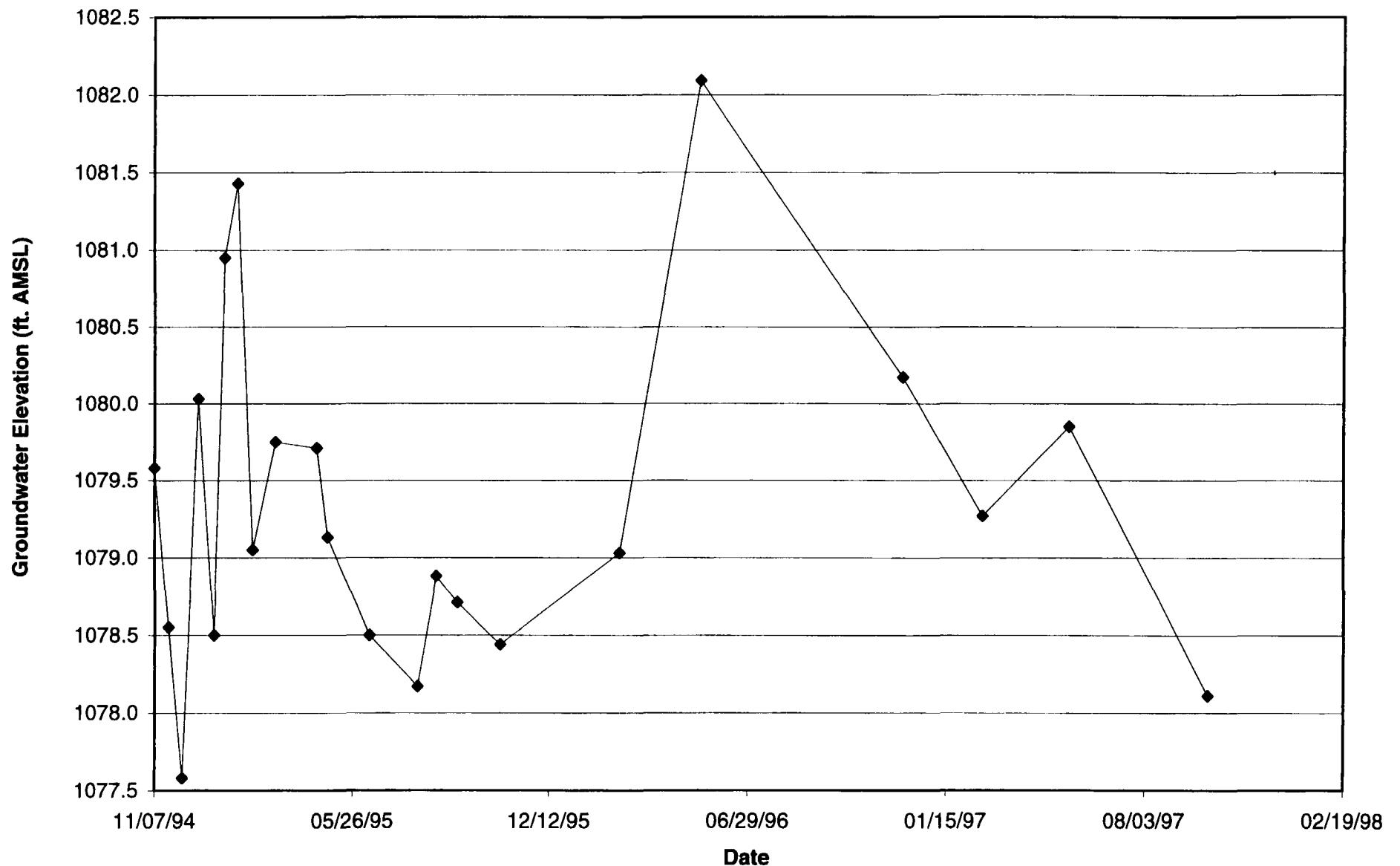


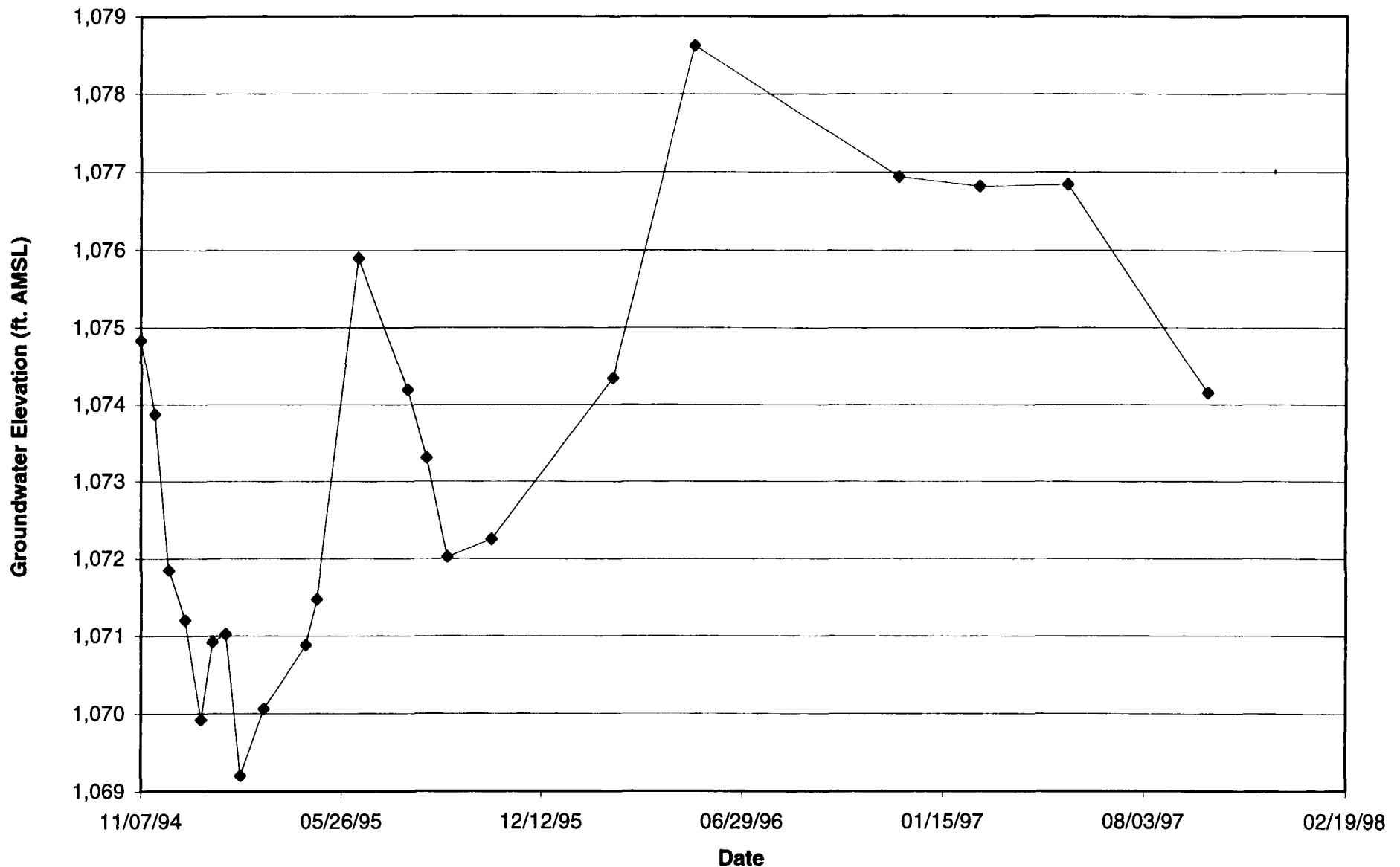
**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-204
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



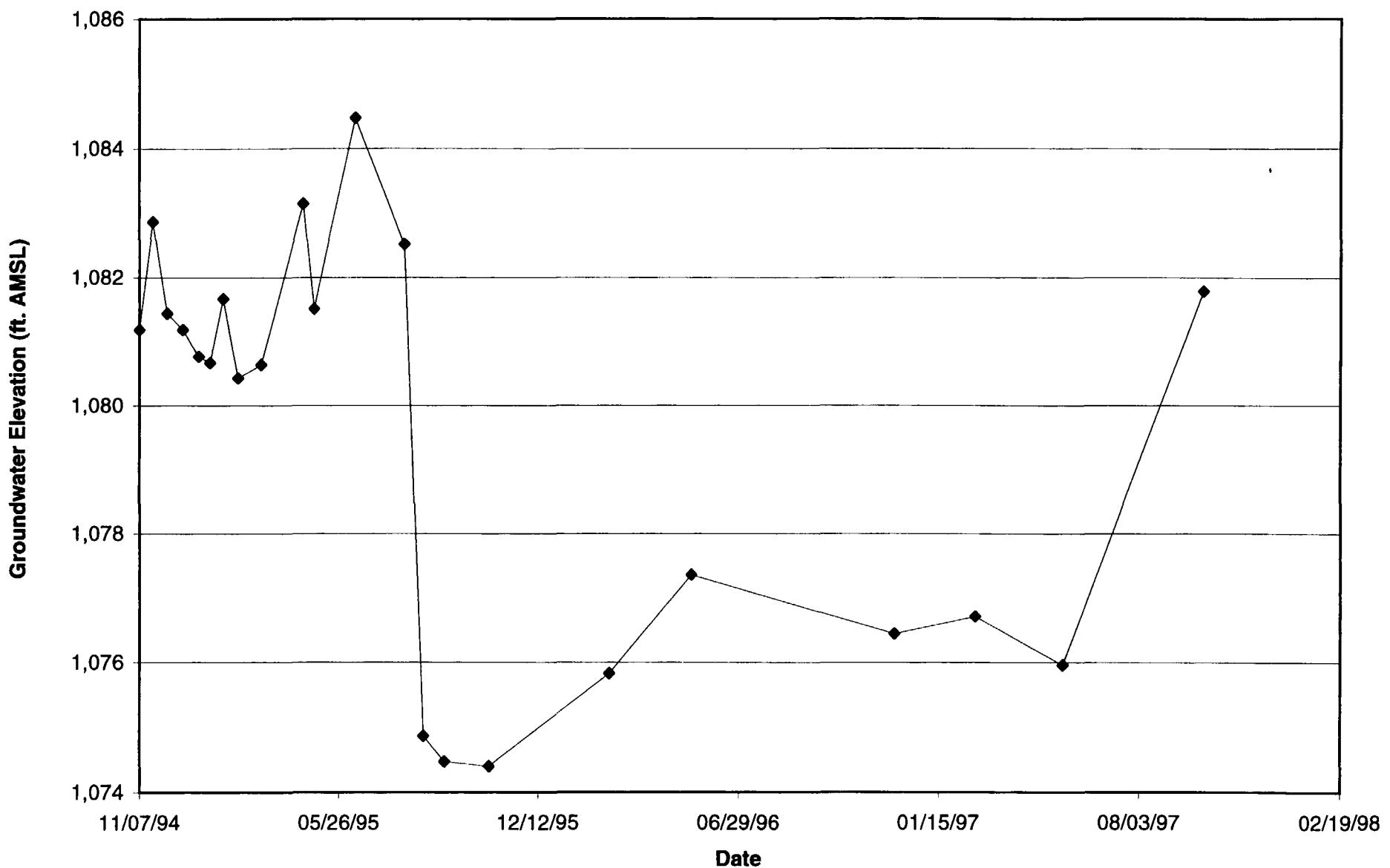
**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-205
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

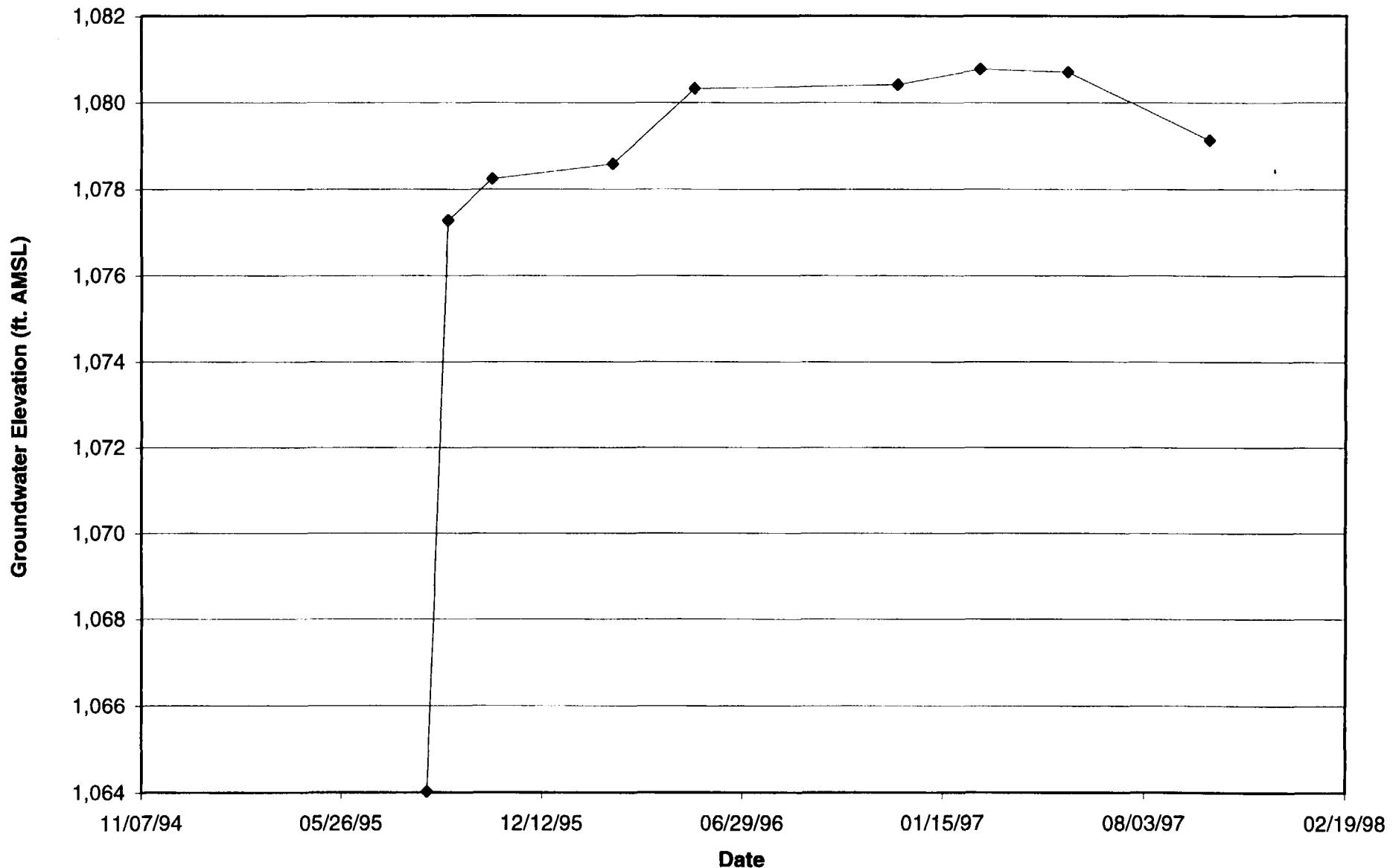




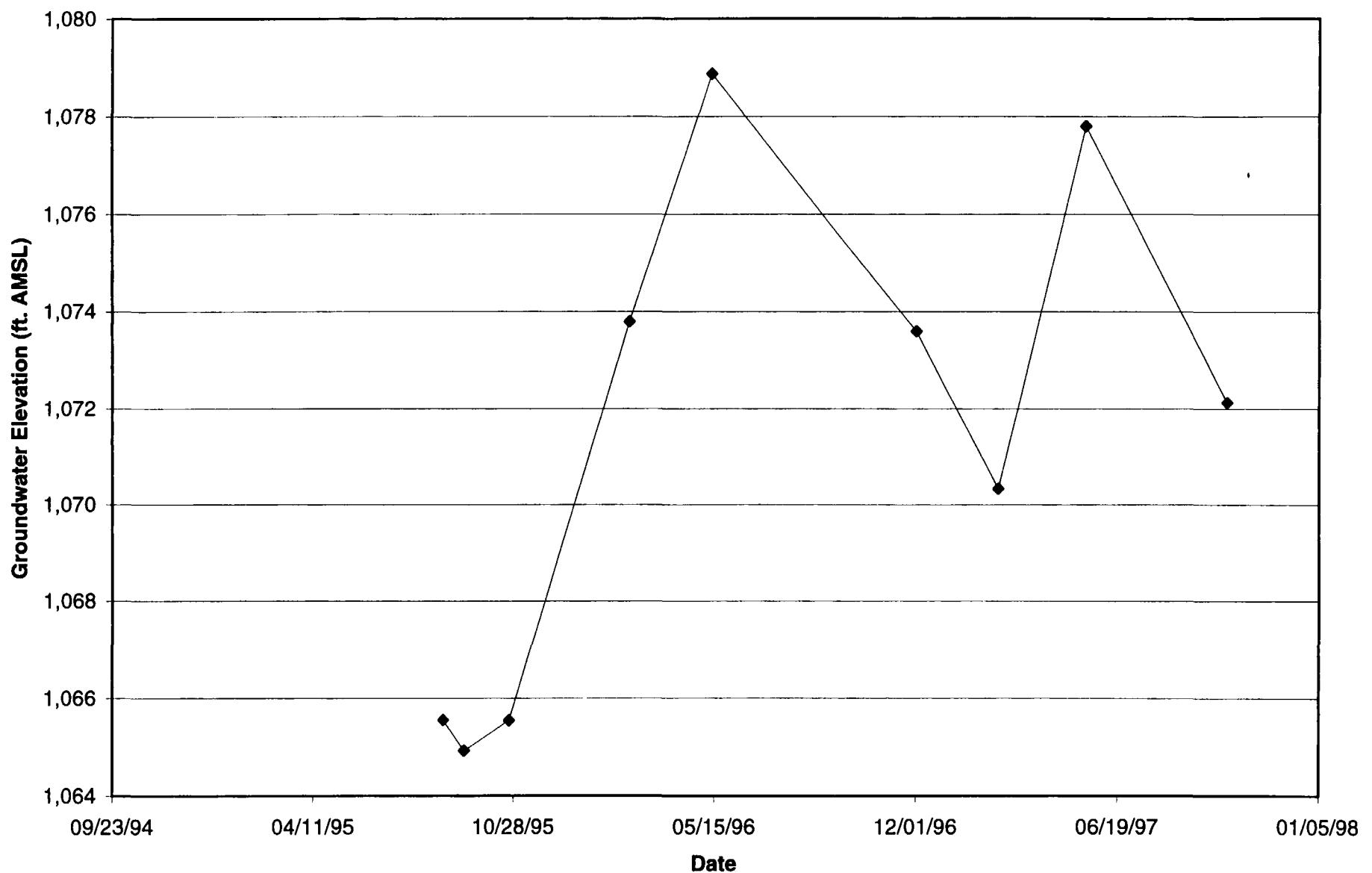


**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-209
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

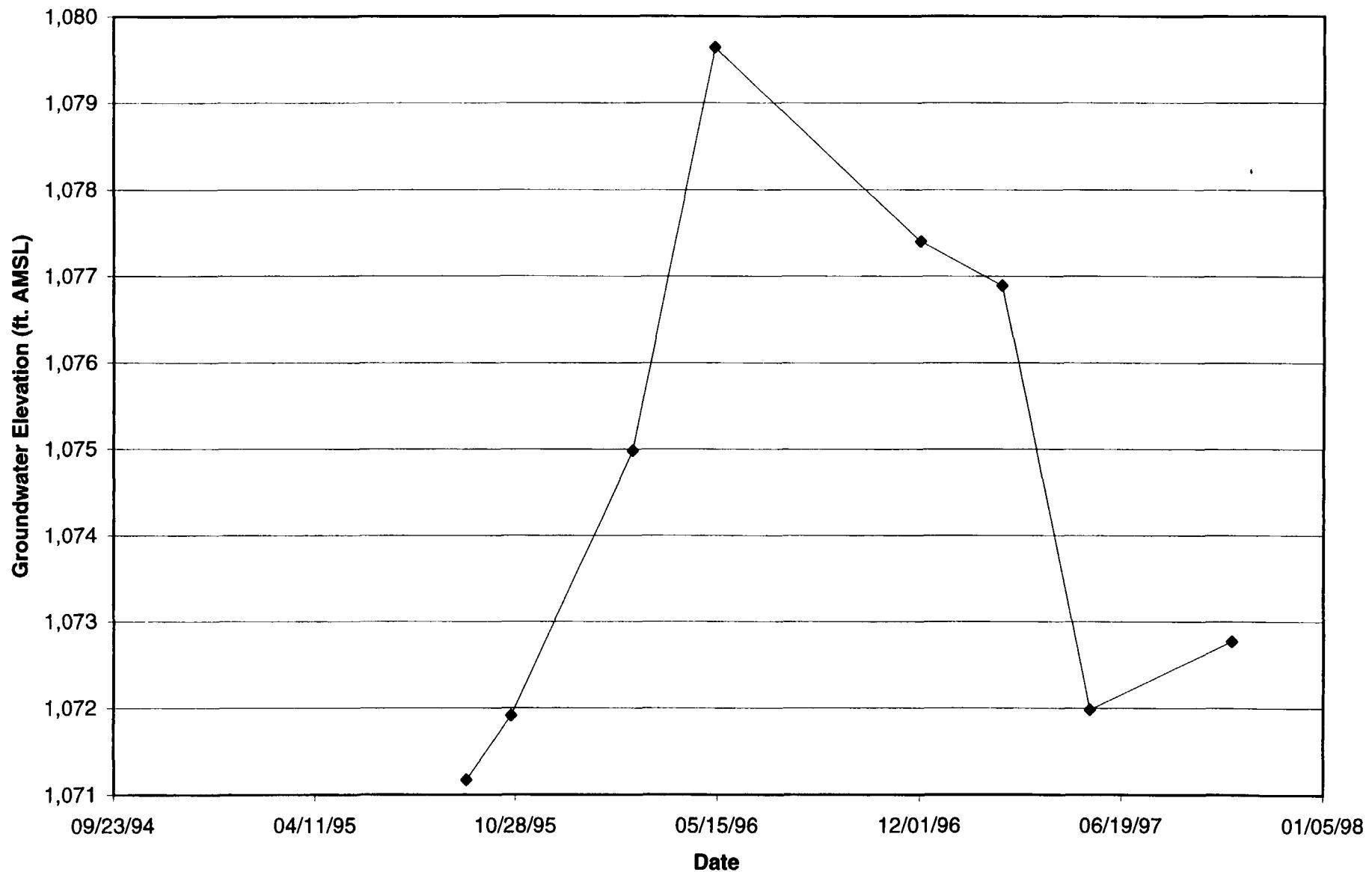




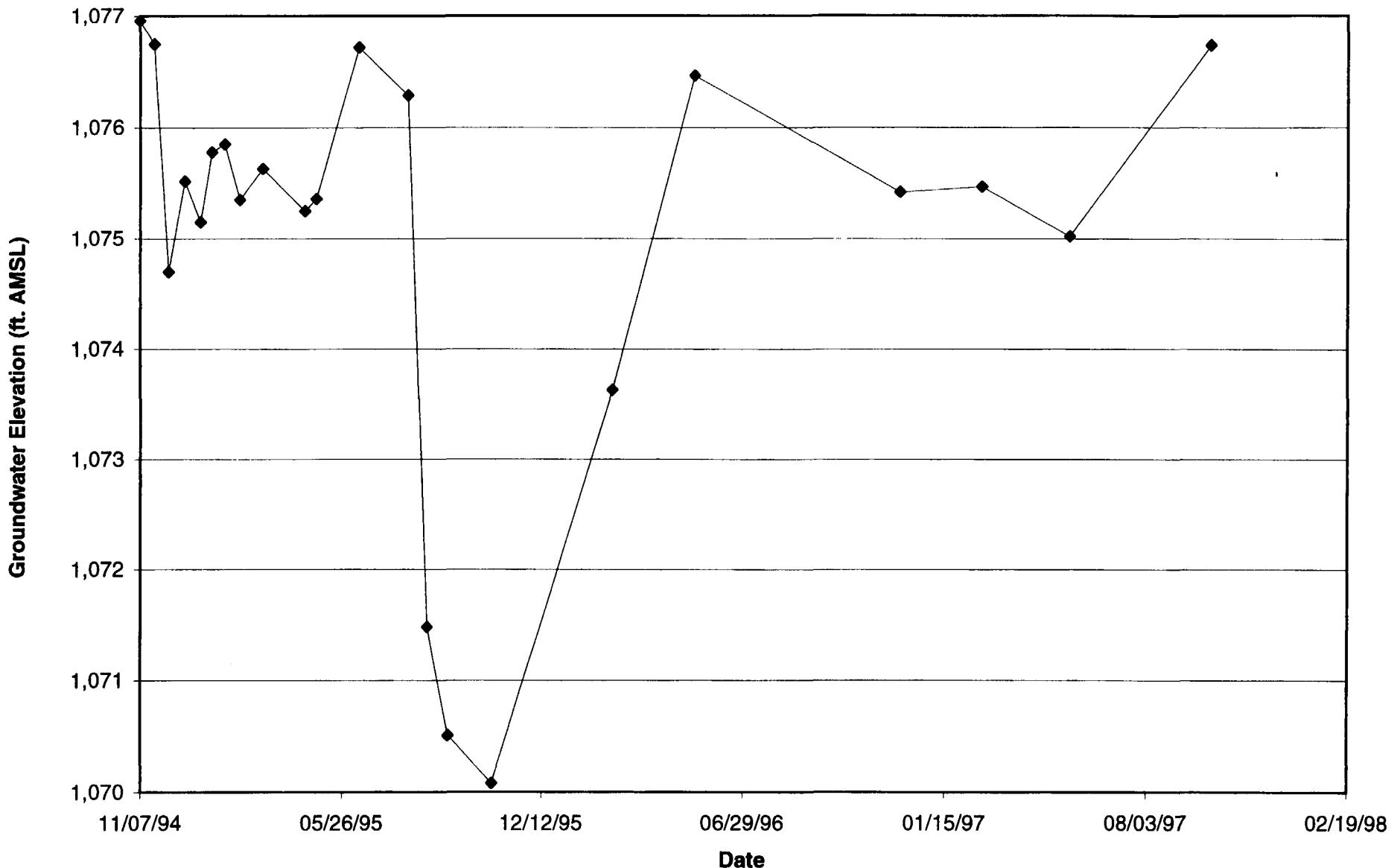
**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-220
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



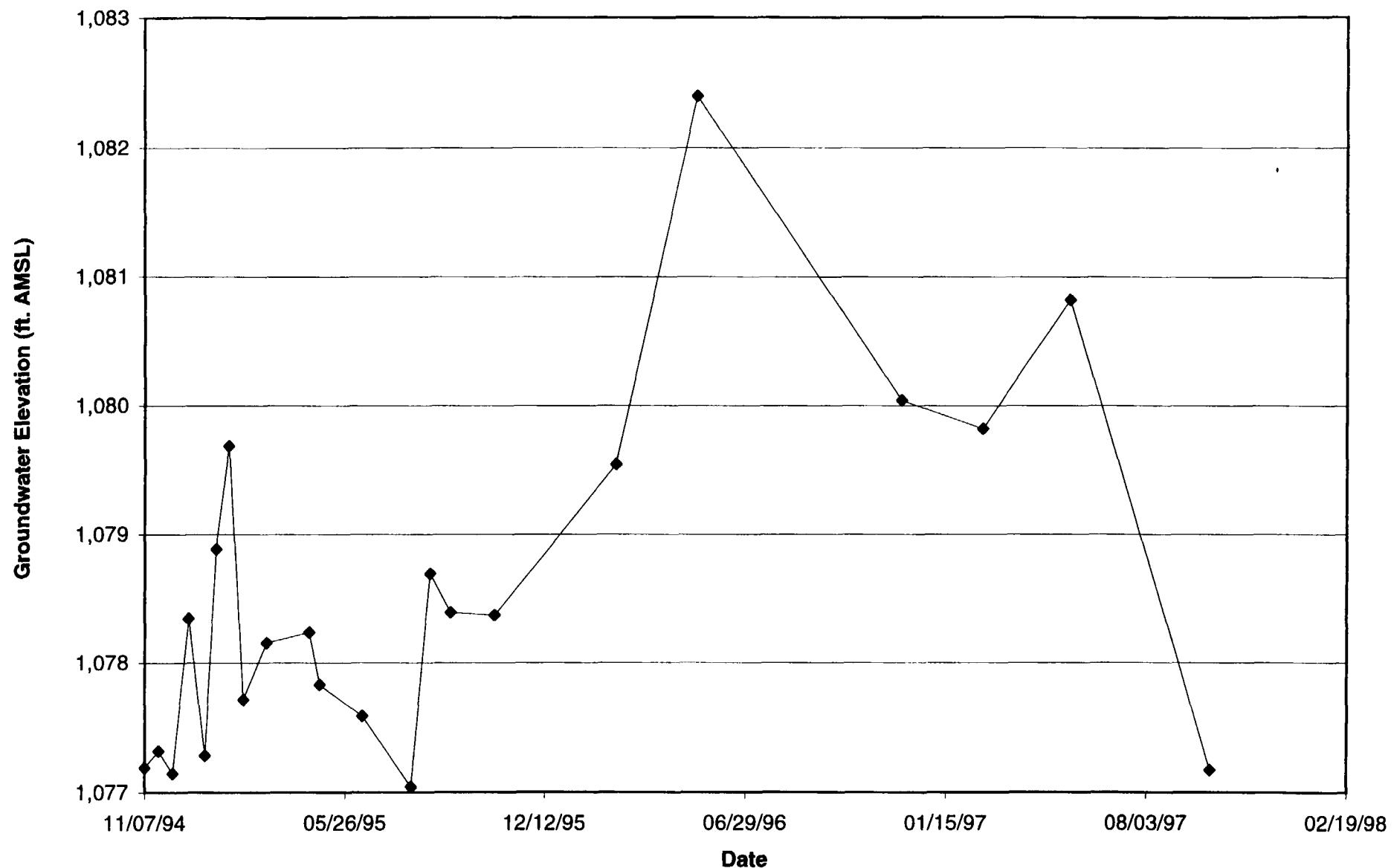
**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-223
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

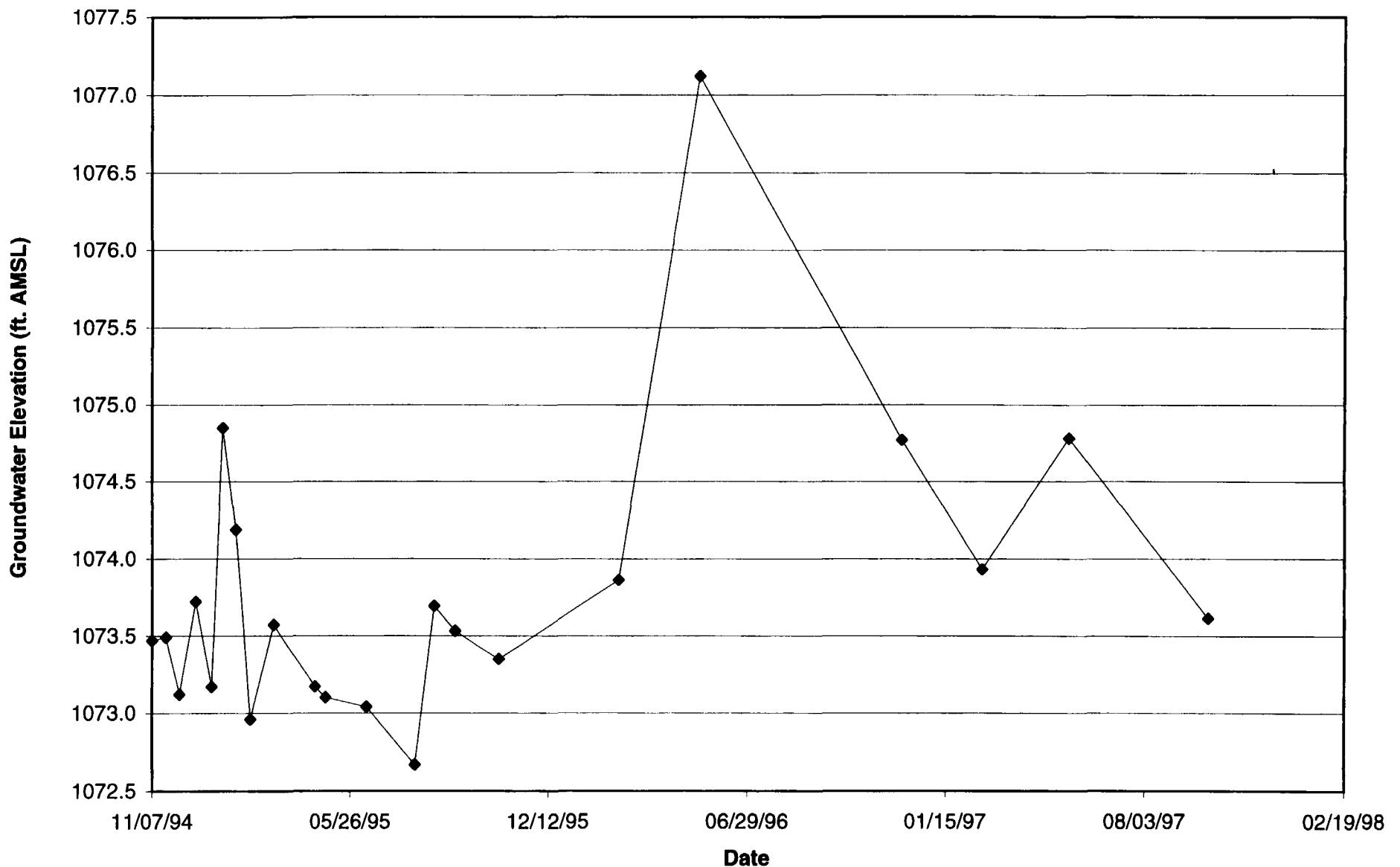


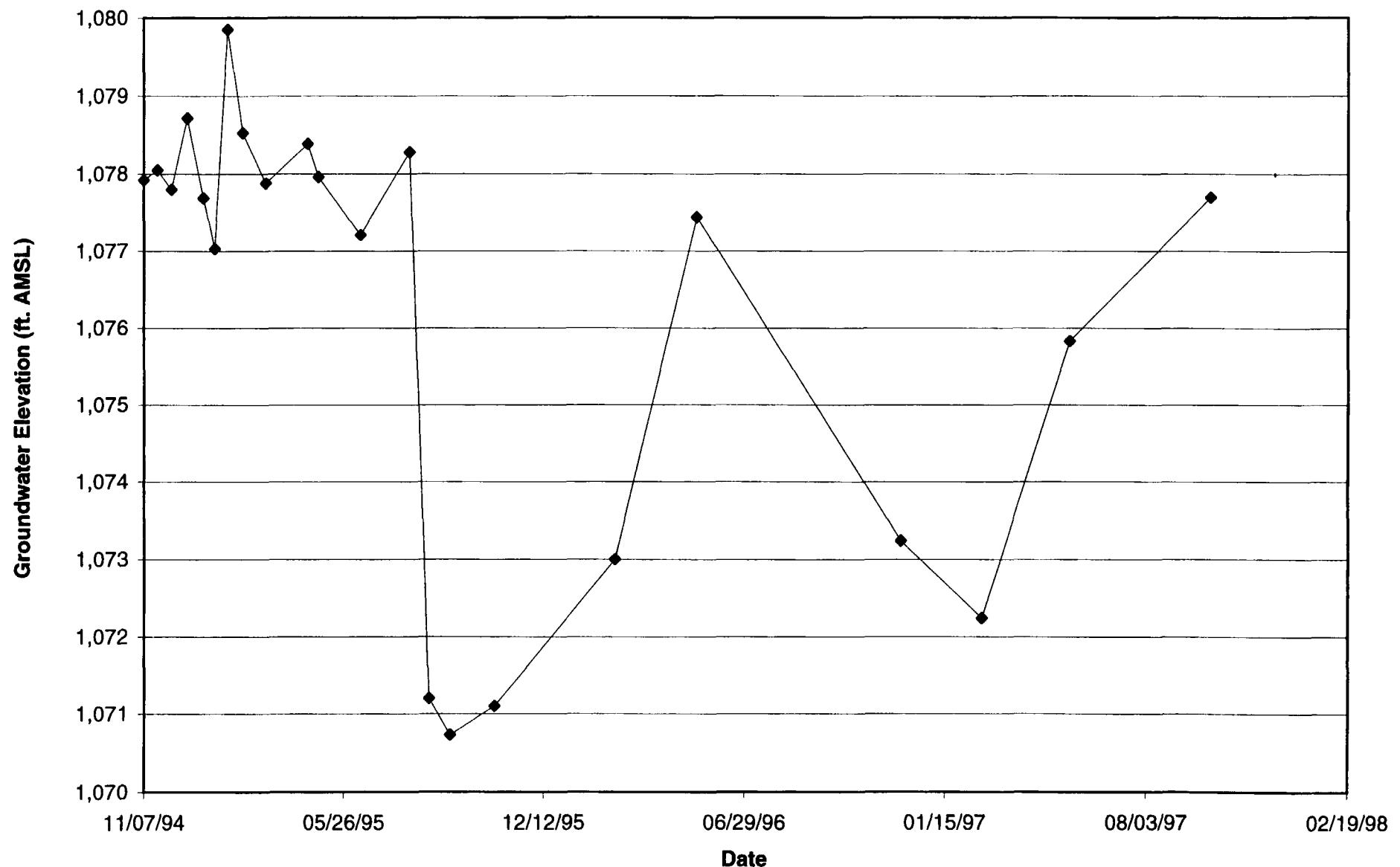
**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: MW-224
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: PZ-201
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

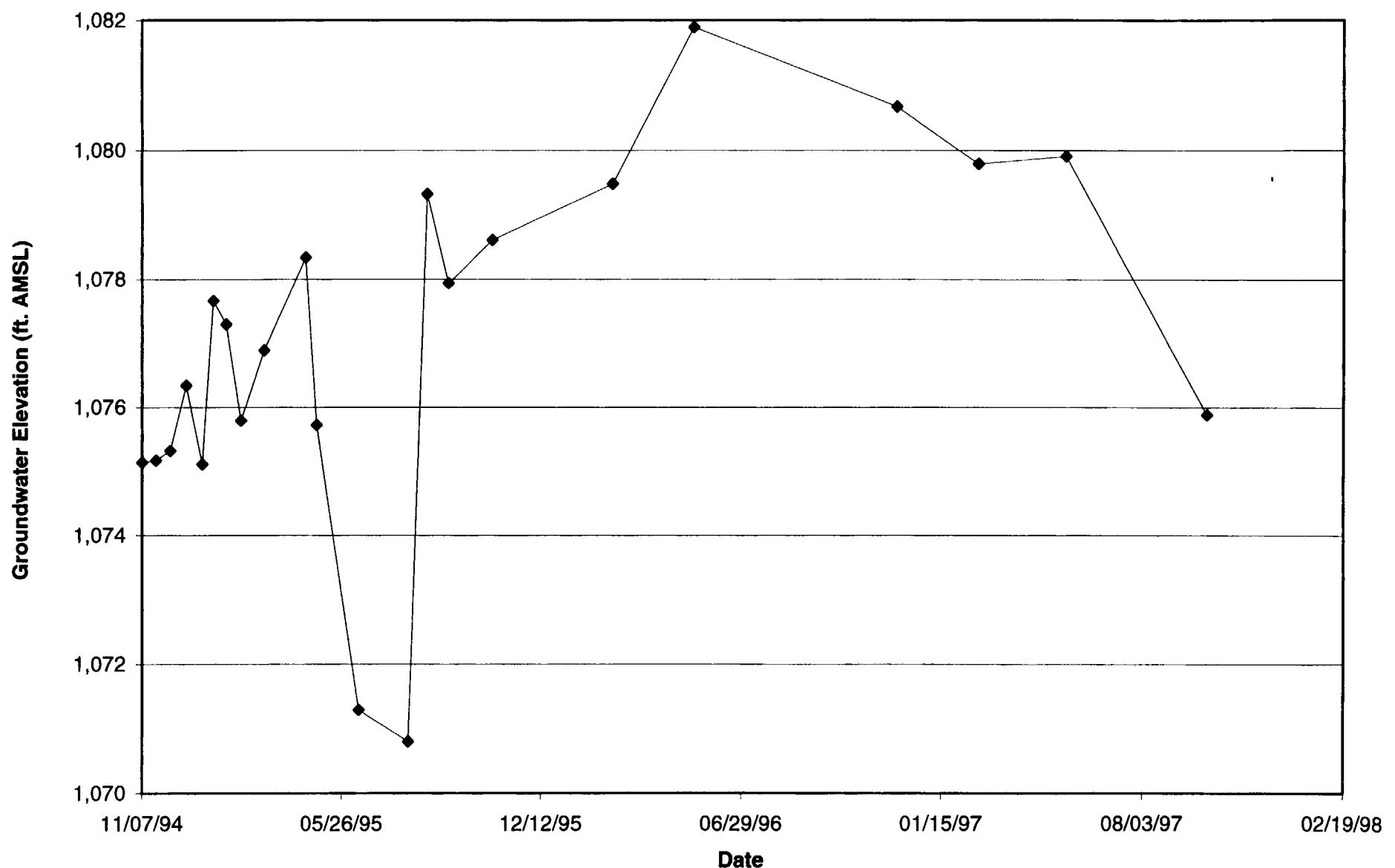


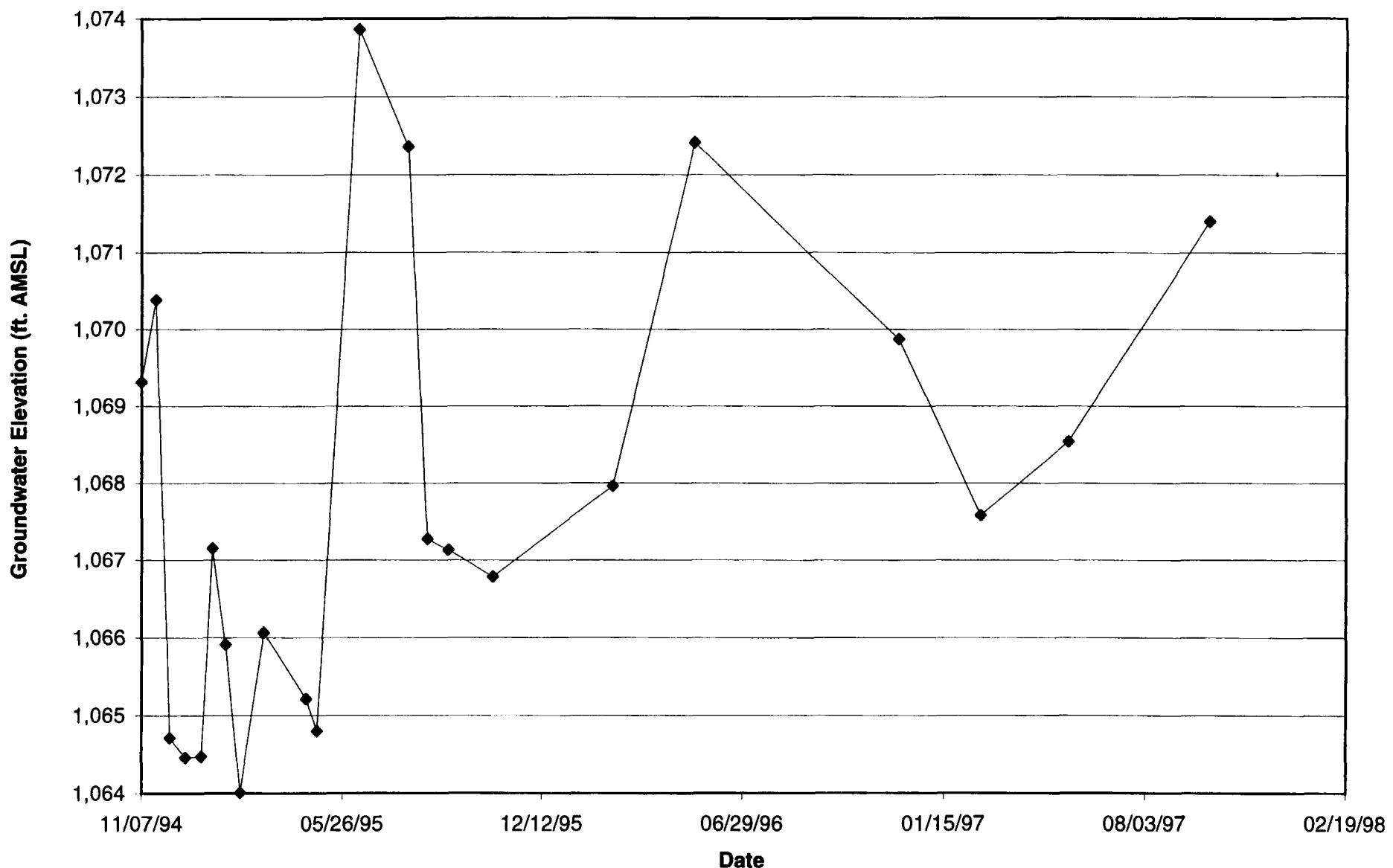


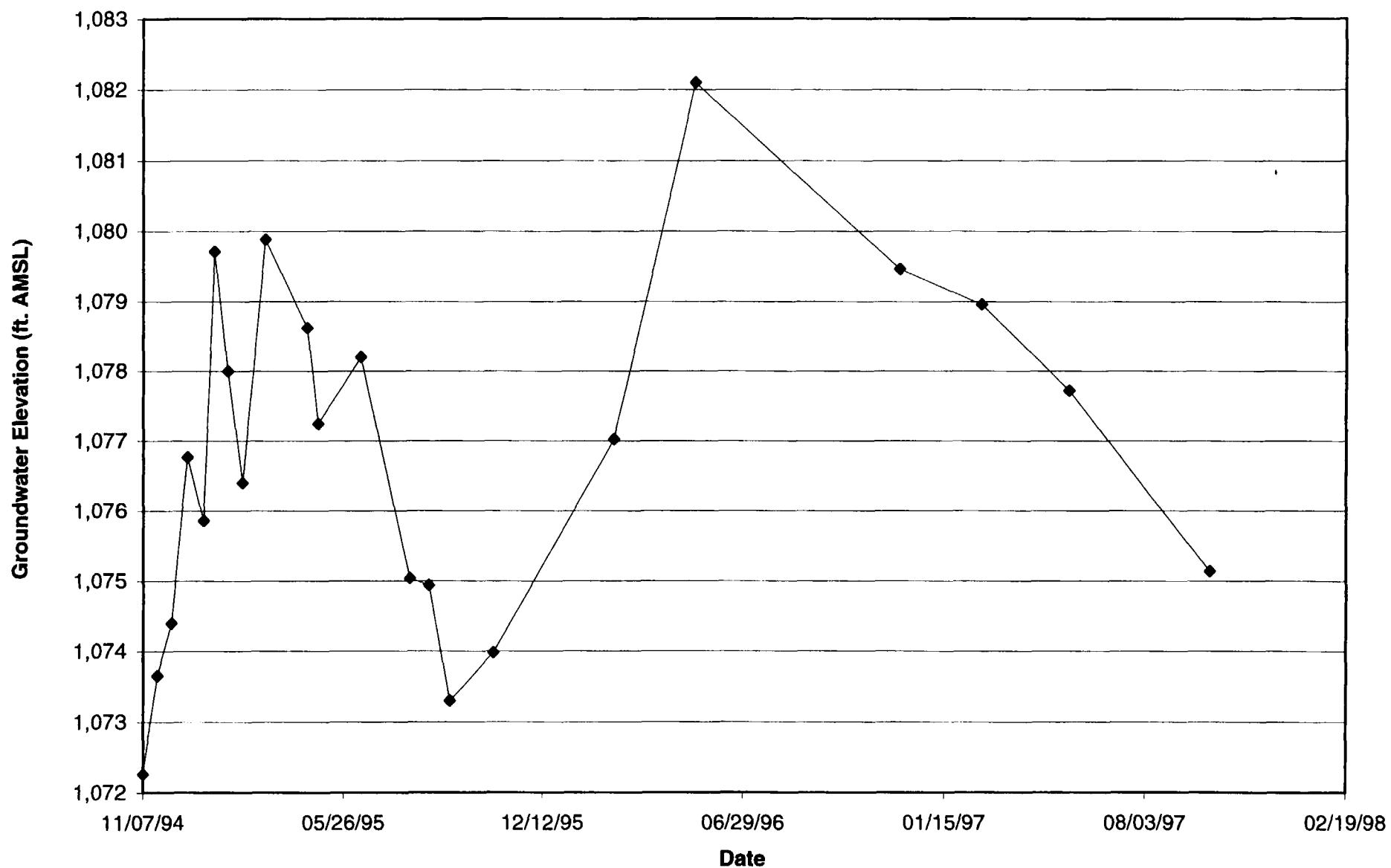


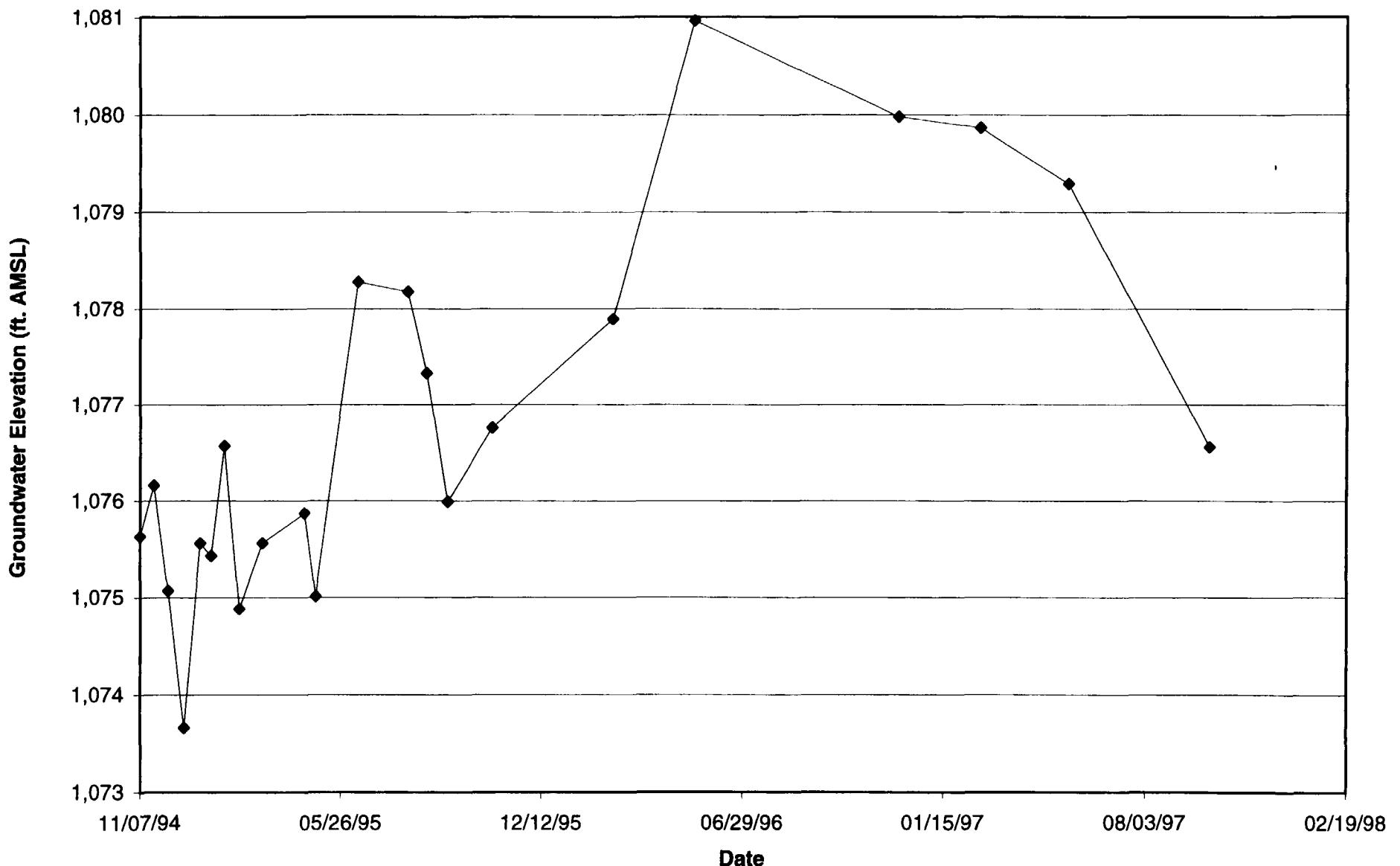
**GROUNDWATER HYDROGRAPH
UPPER INTERMEDIATE UNIT: PZ-204
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

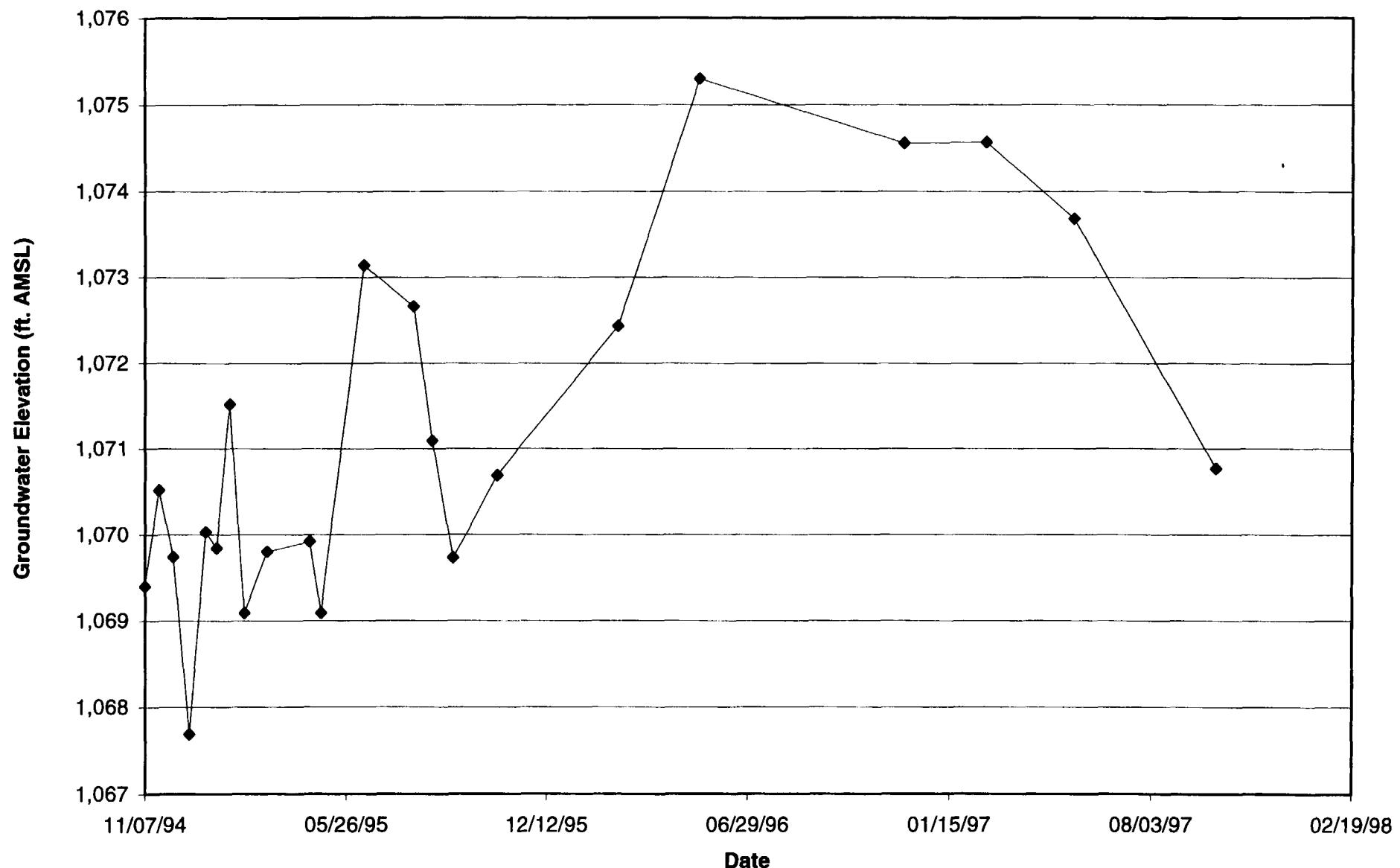
CRA - 6029 (19/11/97)

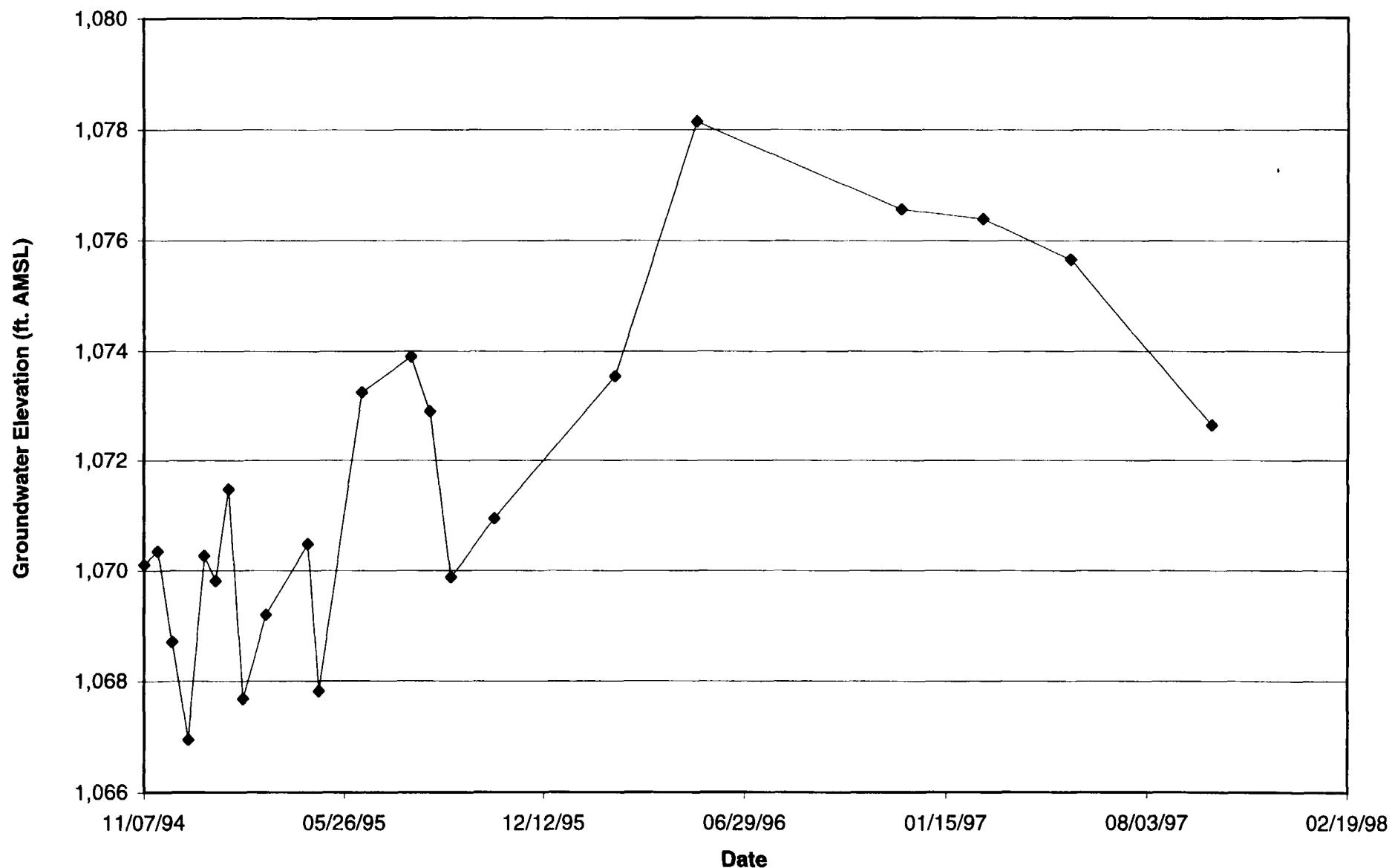


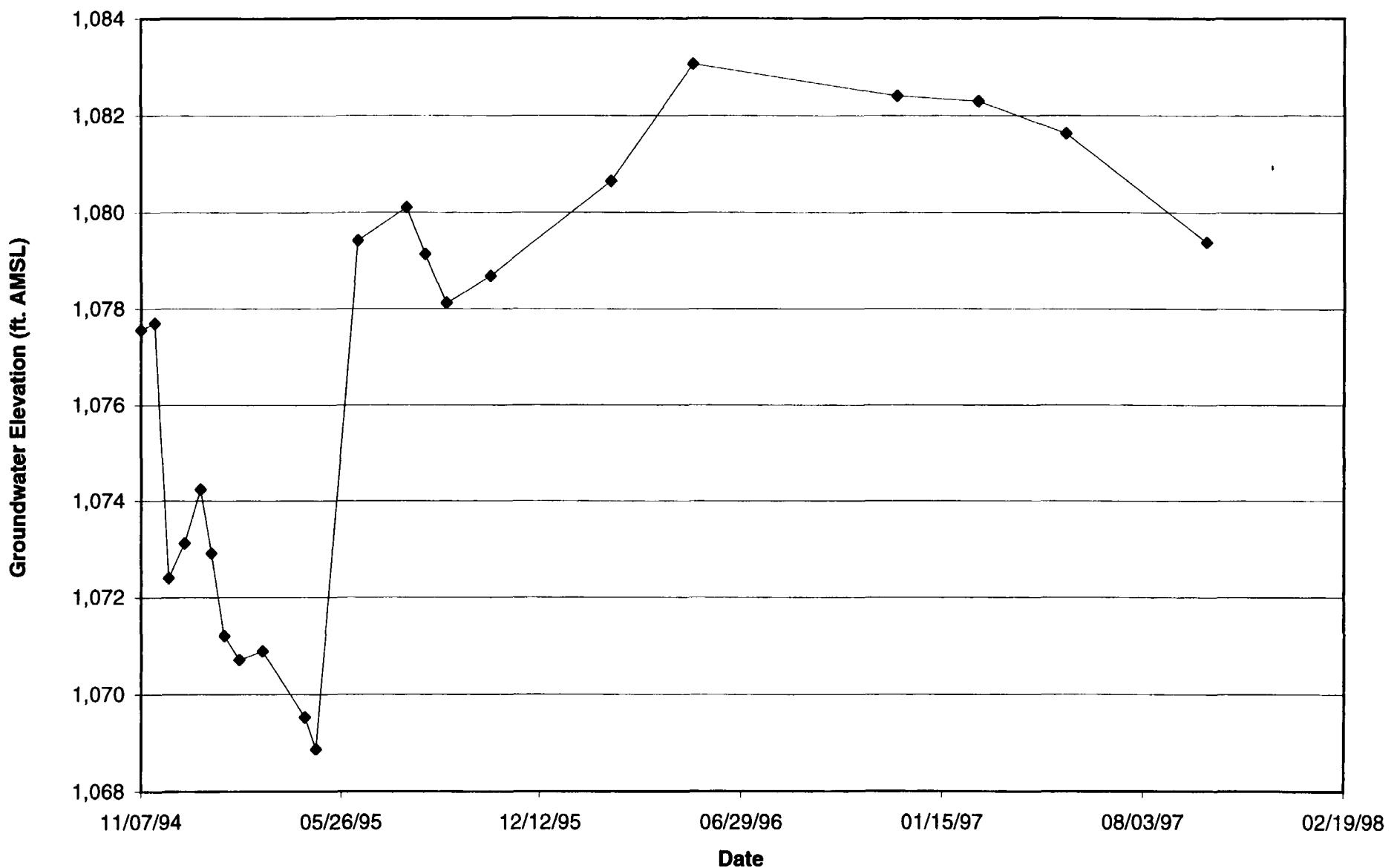




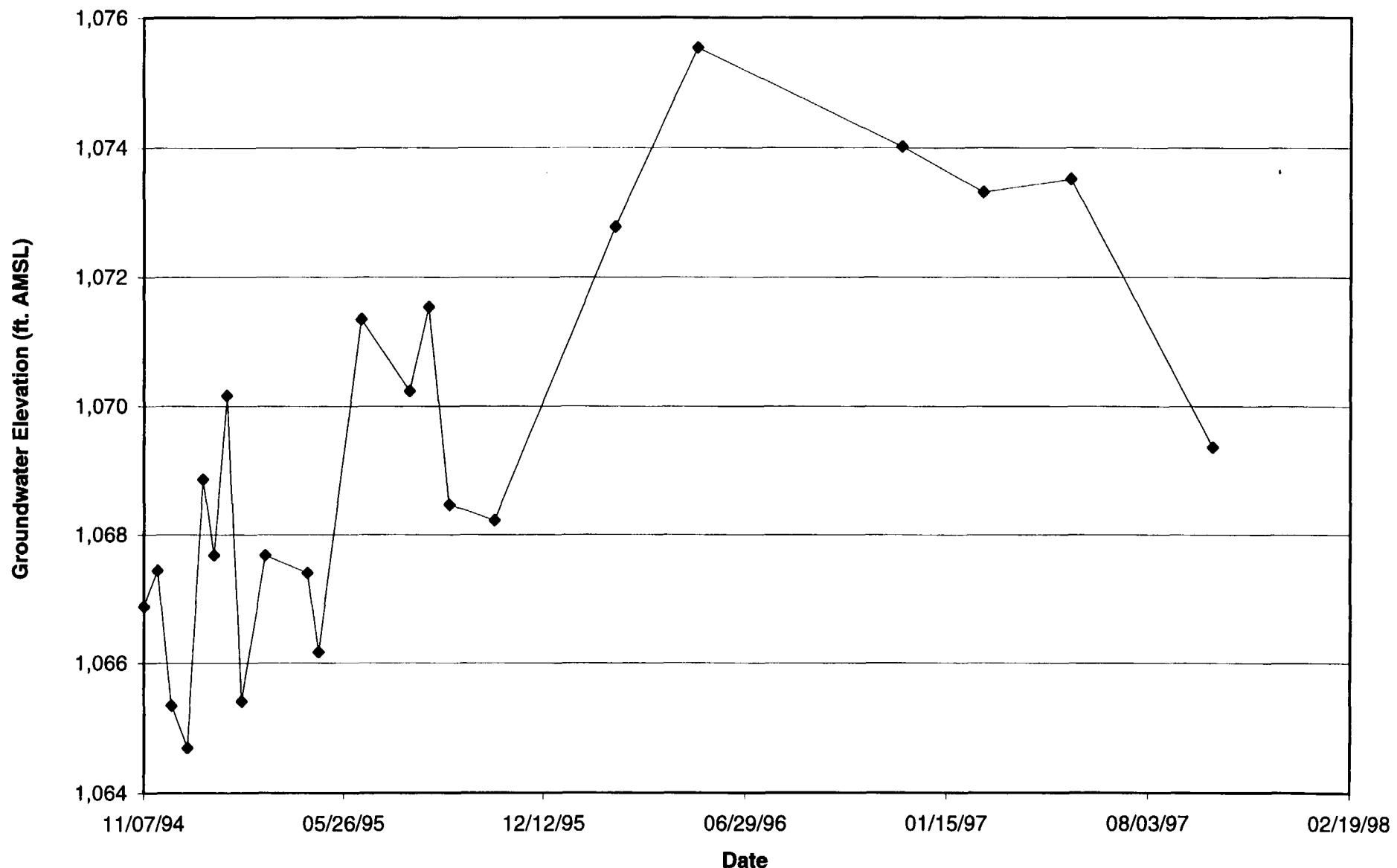


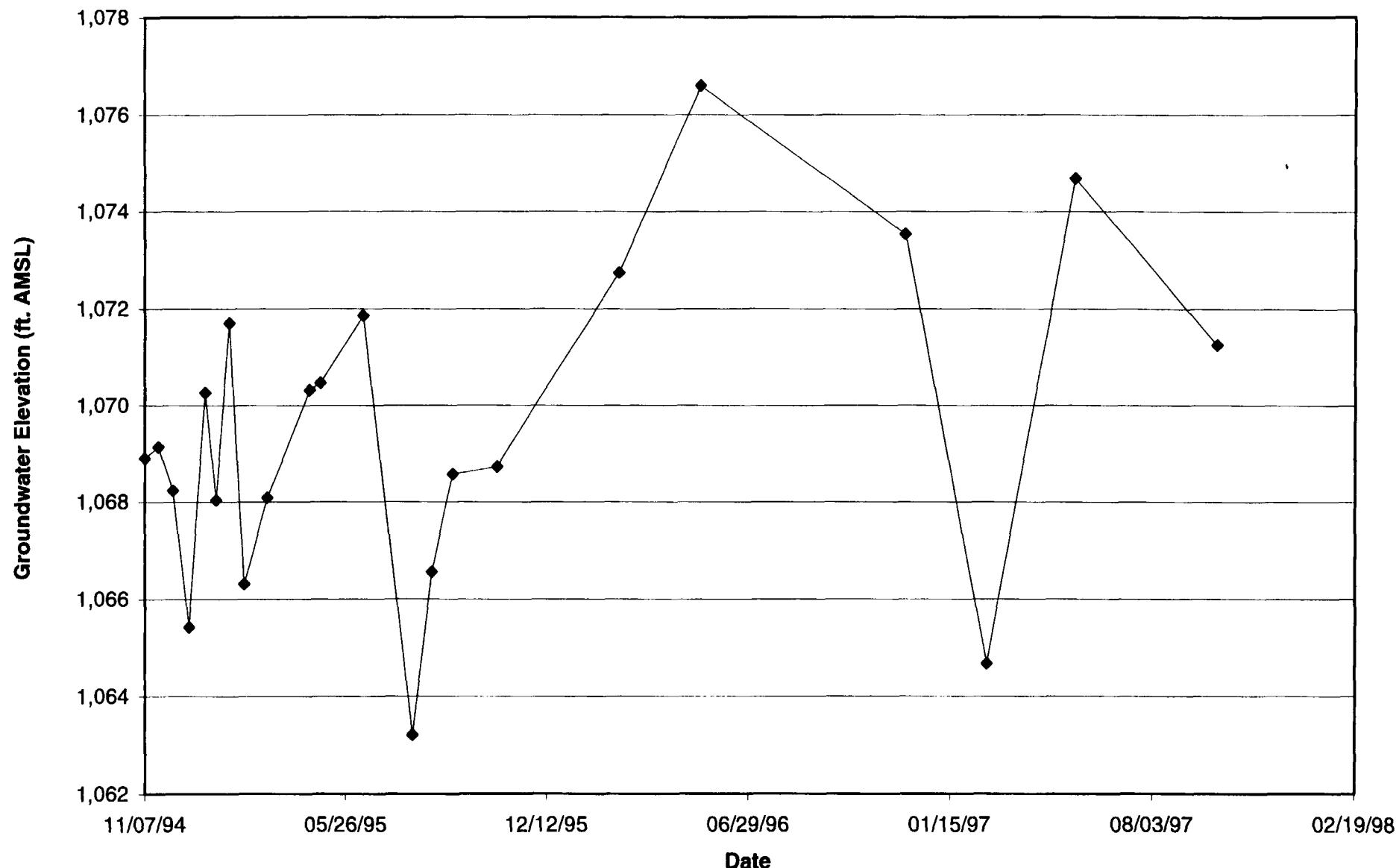




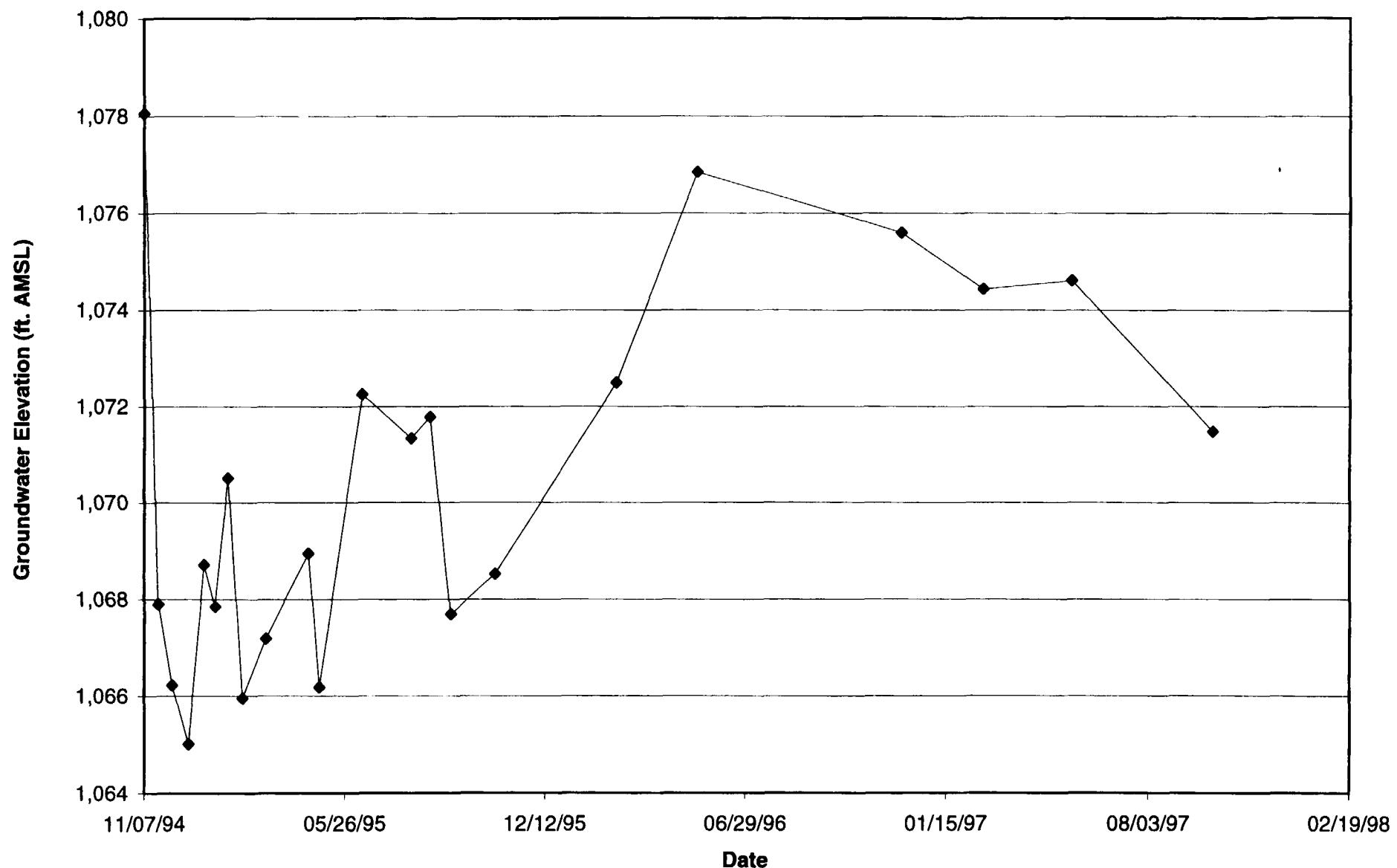


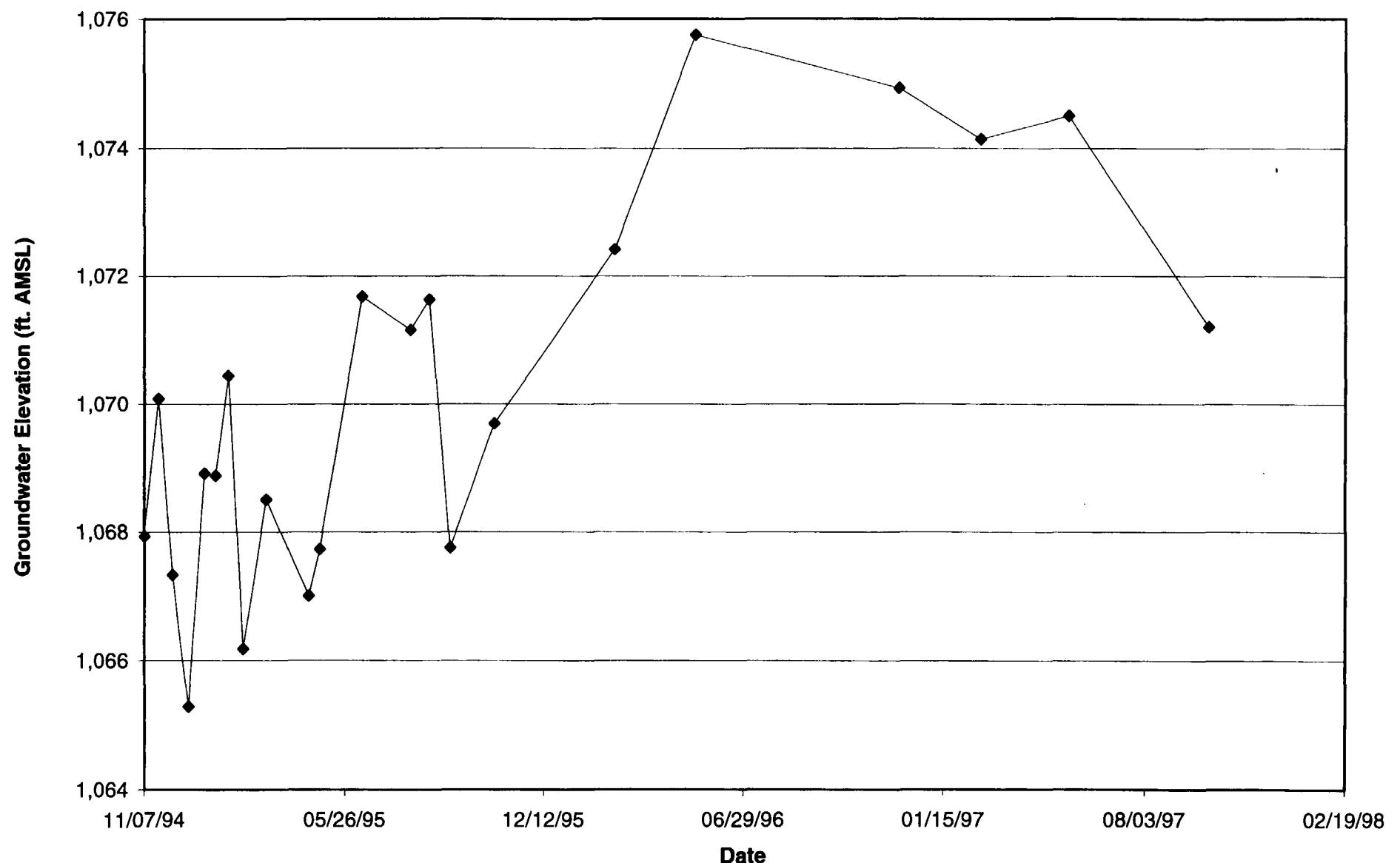
**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-304
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



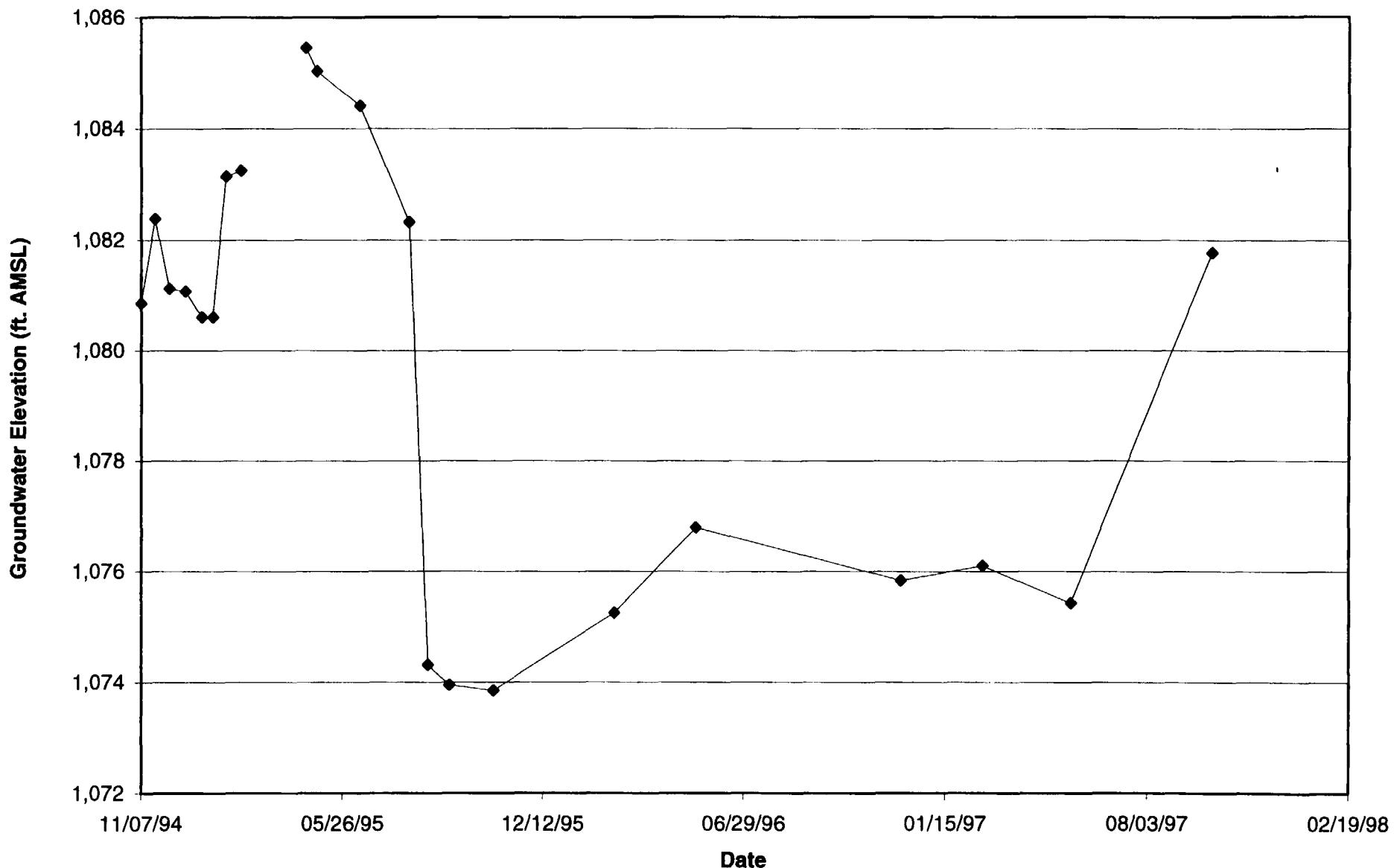


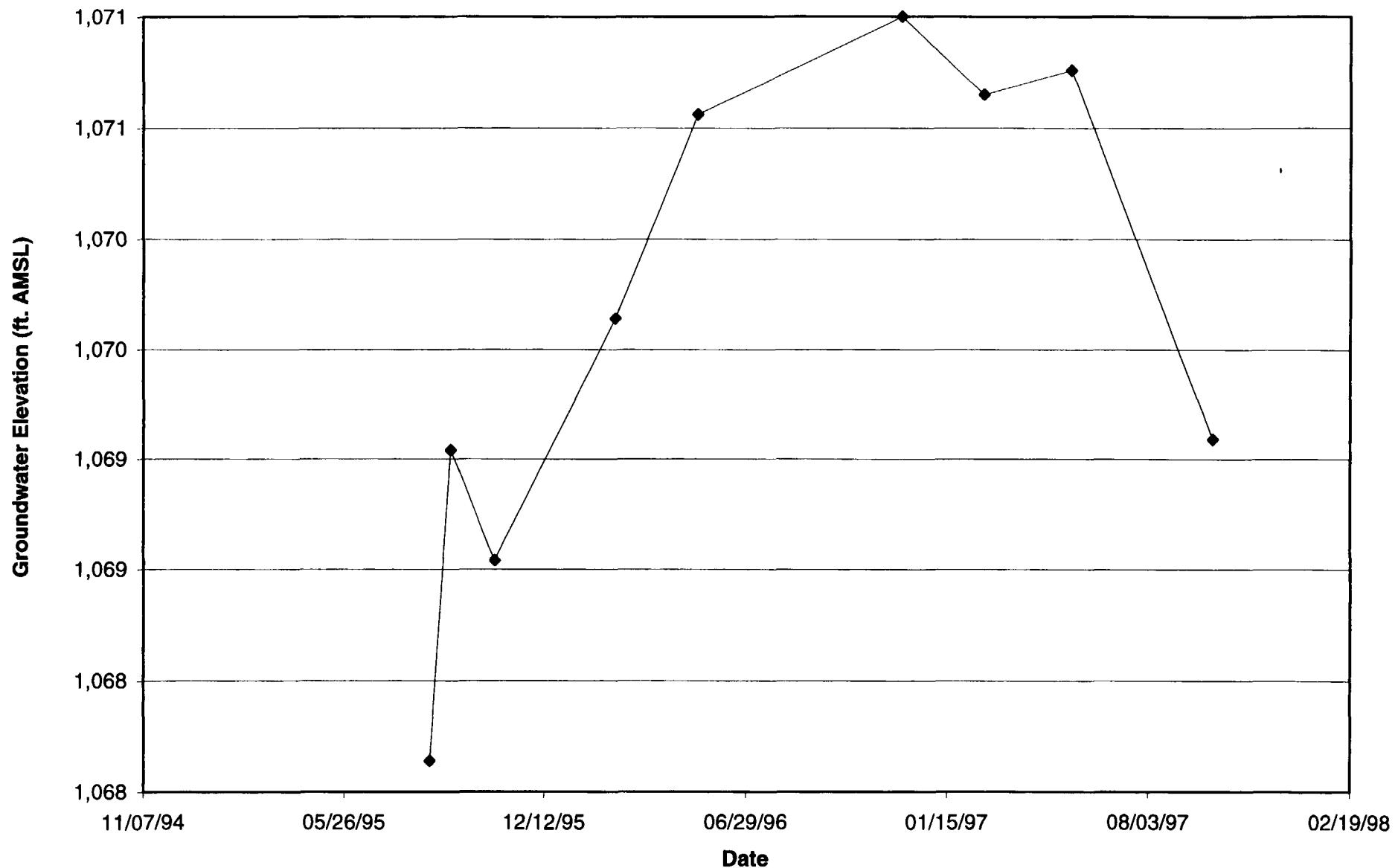
**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-306
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



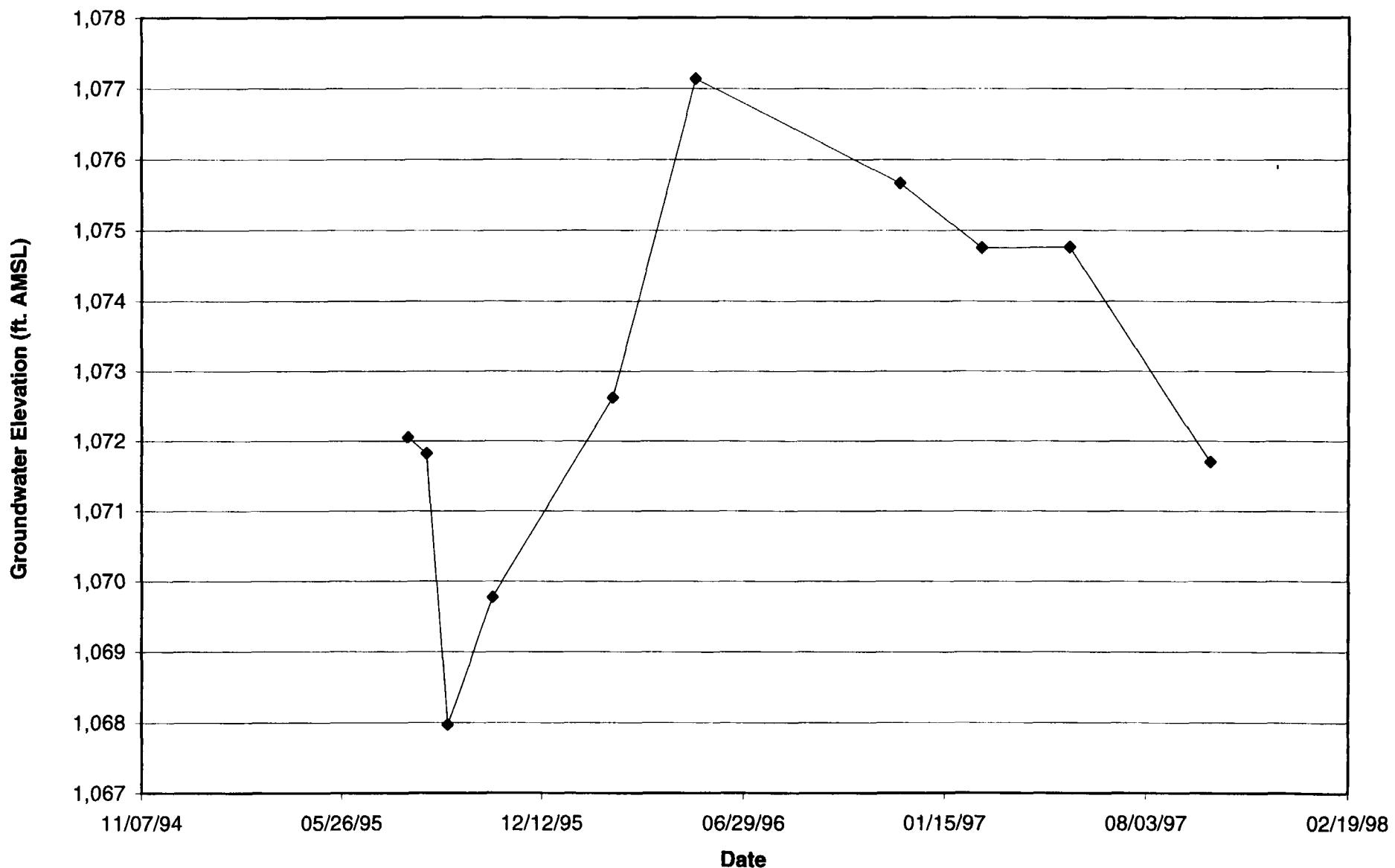


**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-309
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



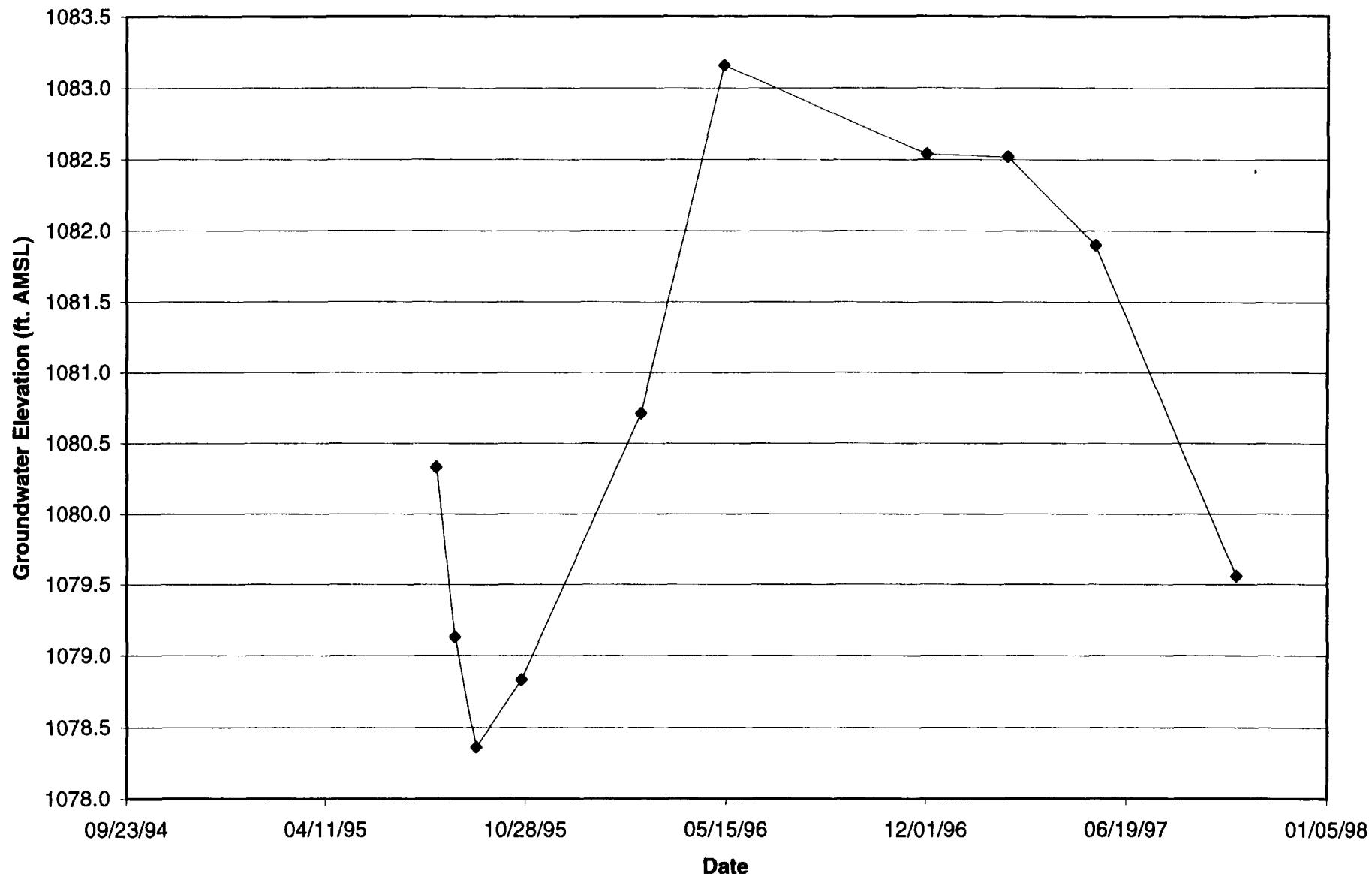


**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-320
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

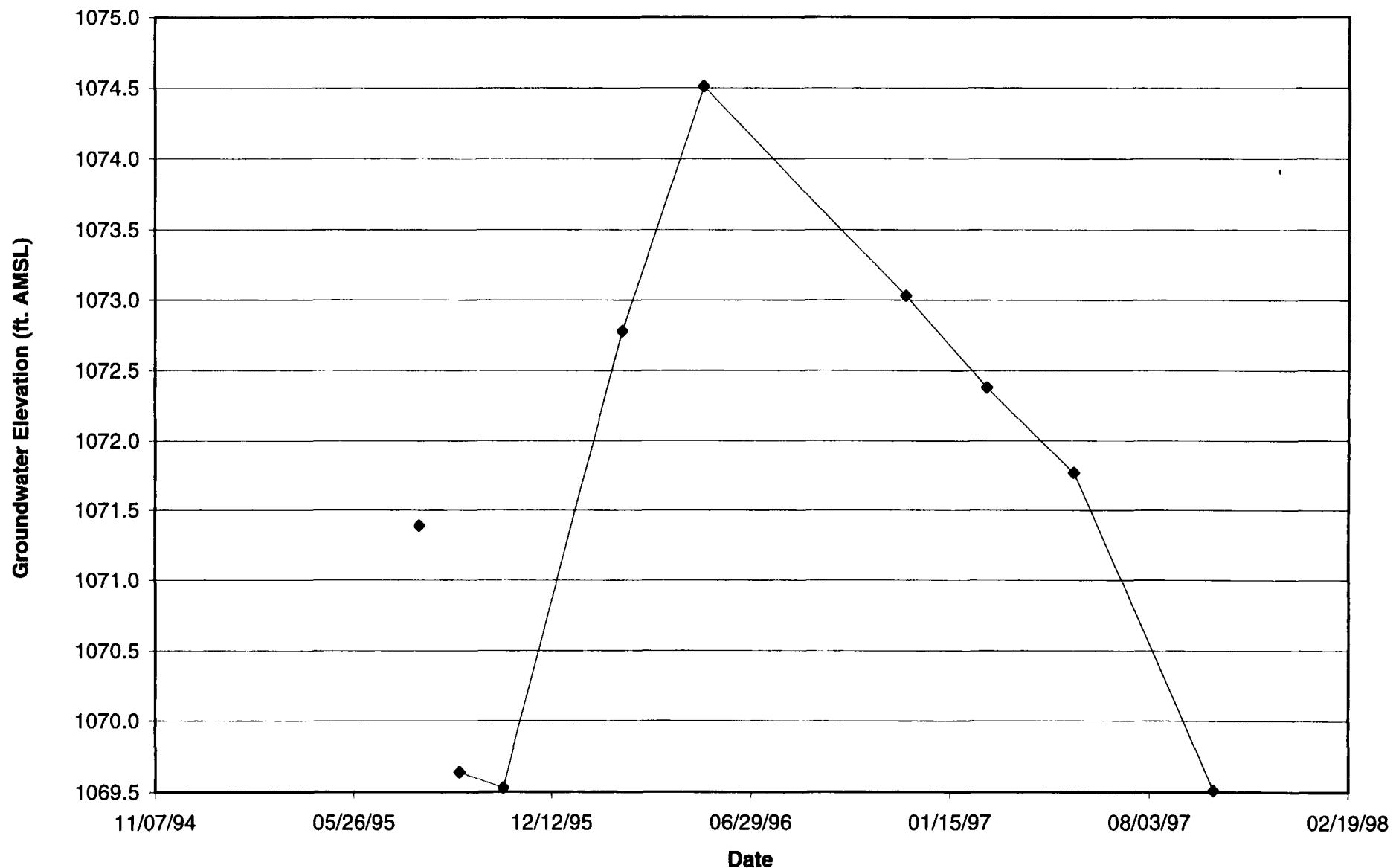


**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-321
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

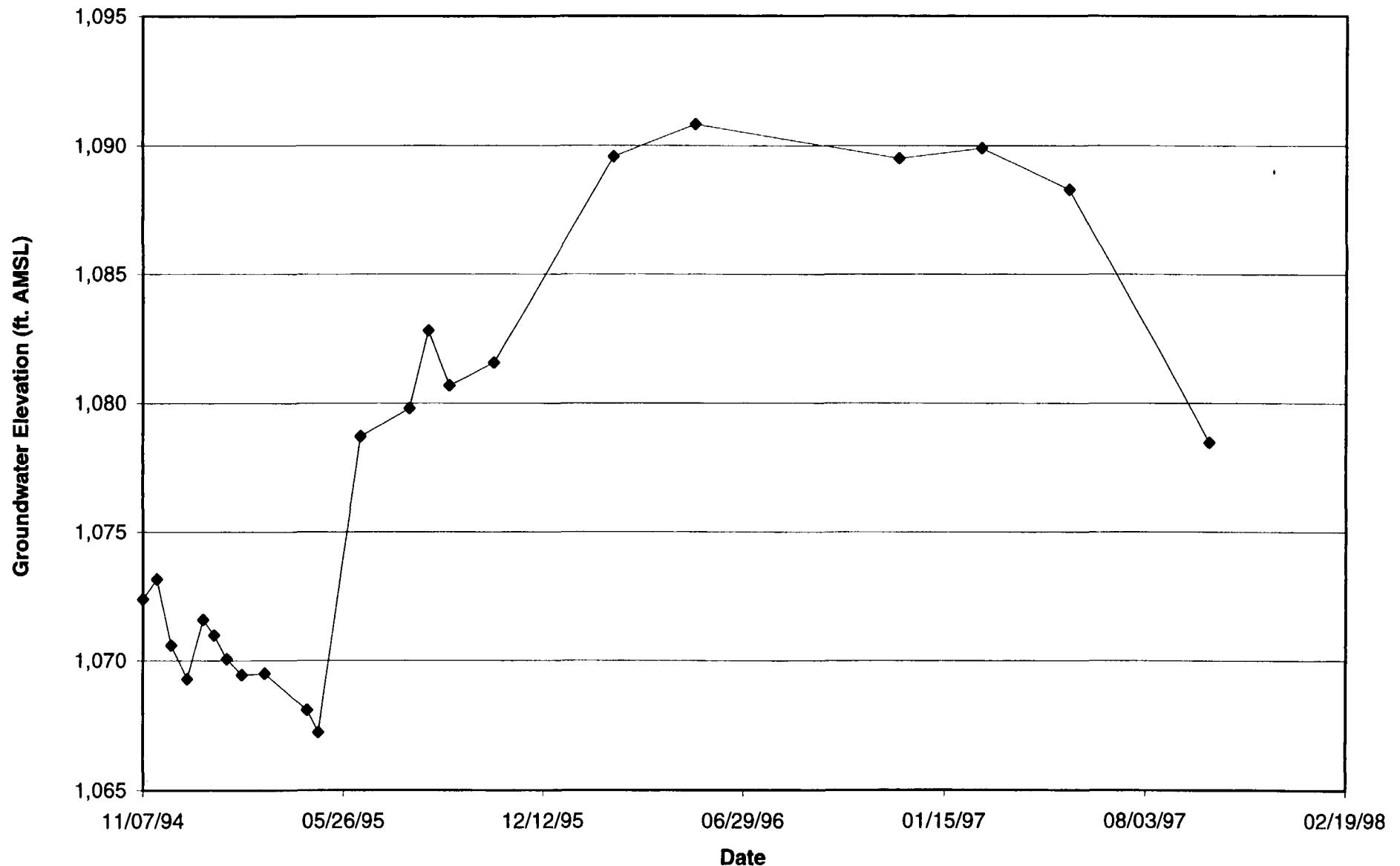
CRA - 6029 (19/11/97)



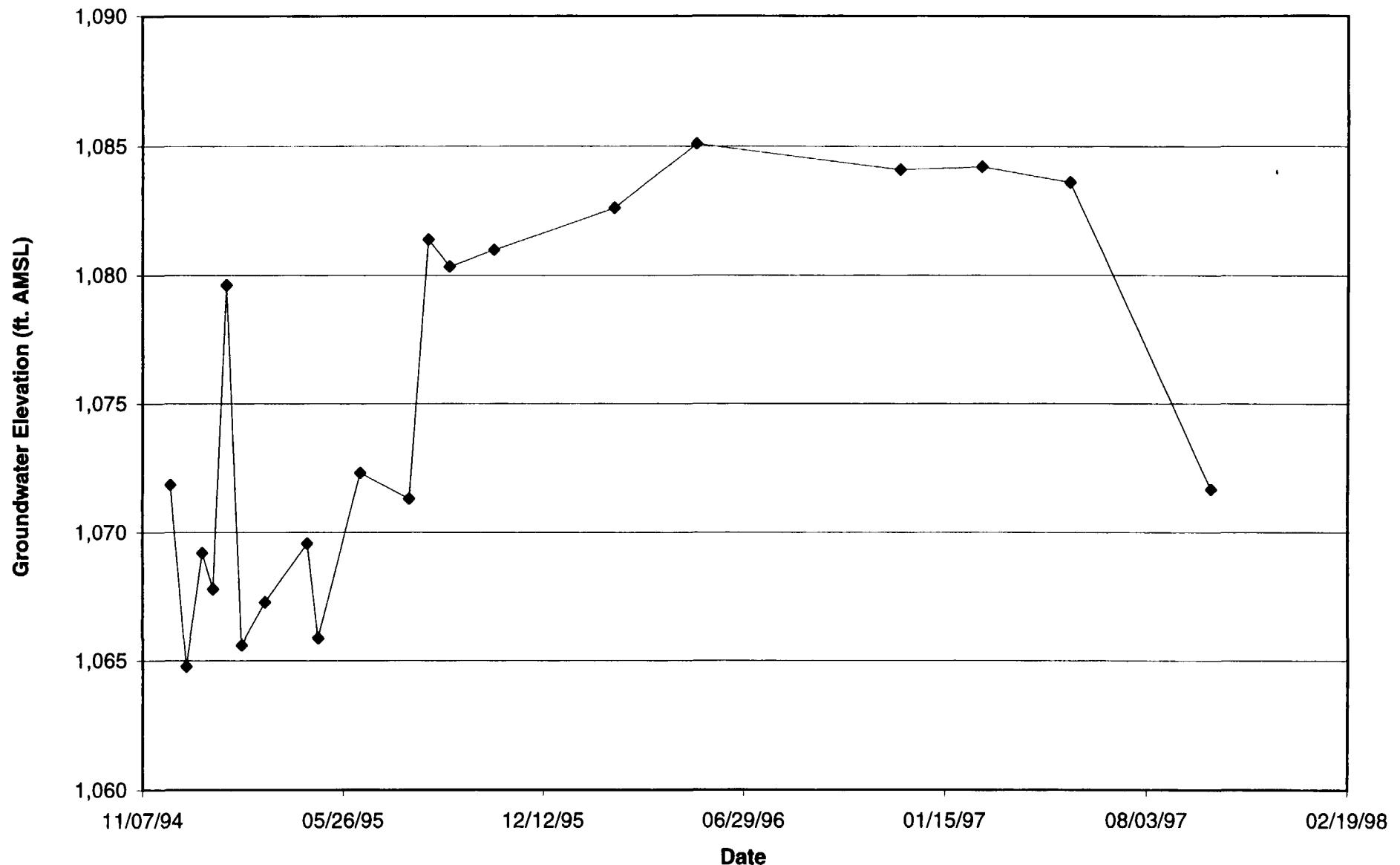
**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-322
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



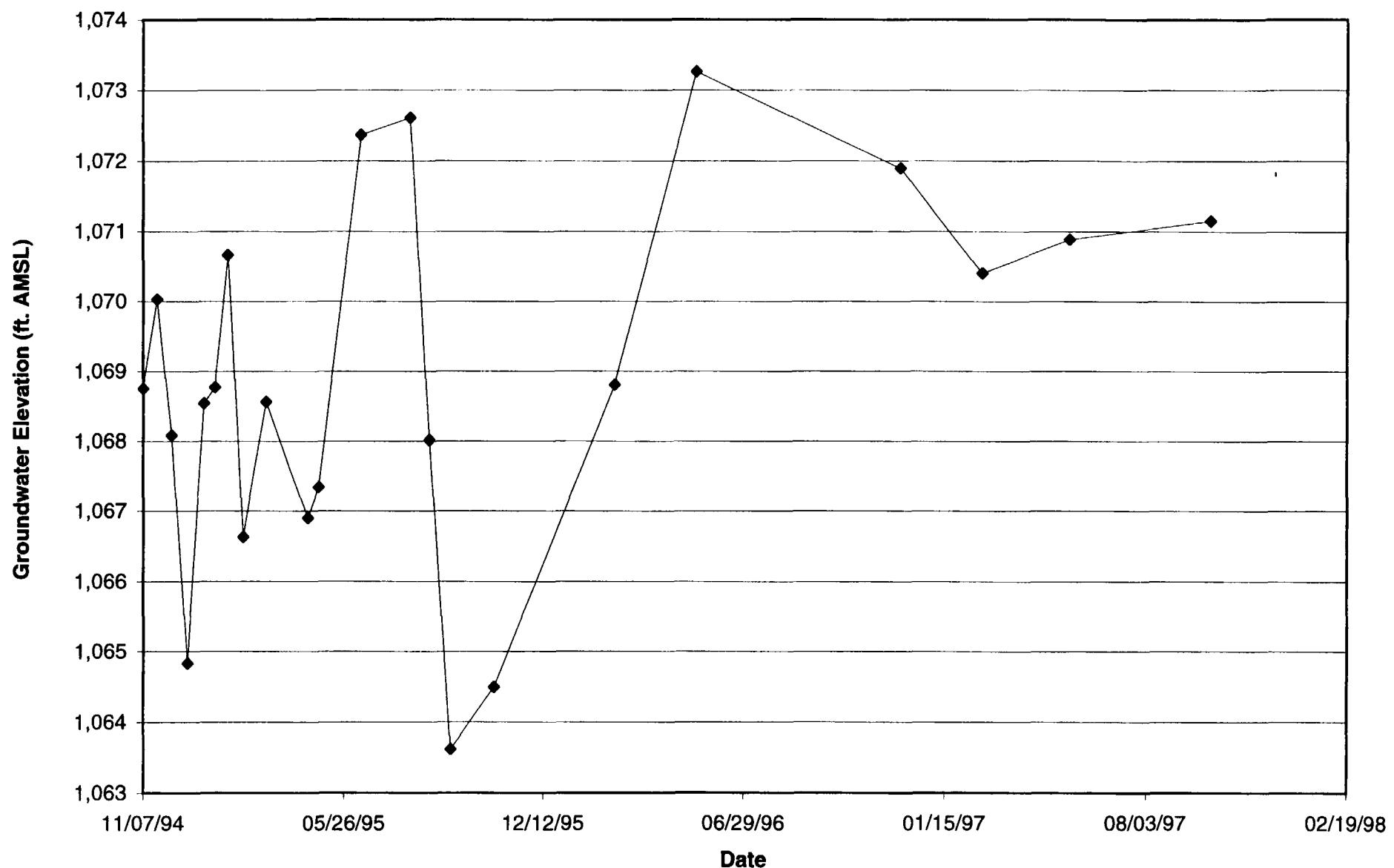
**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: MW-324
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



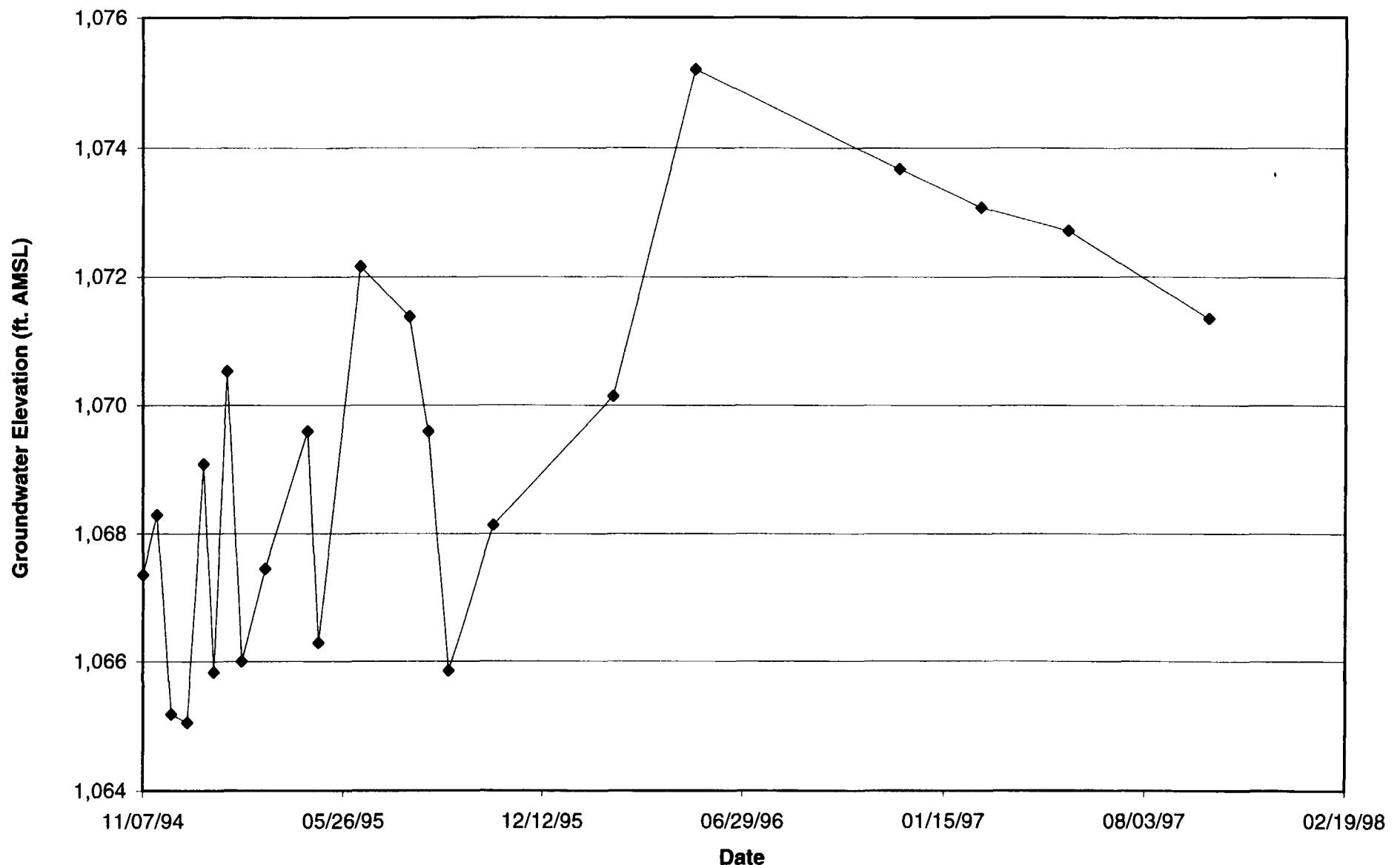
**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-301
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

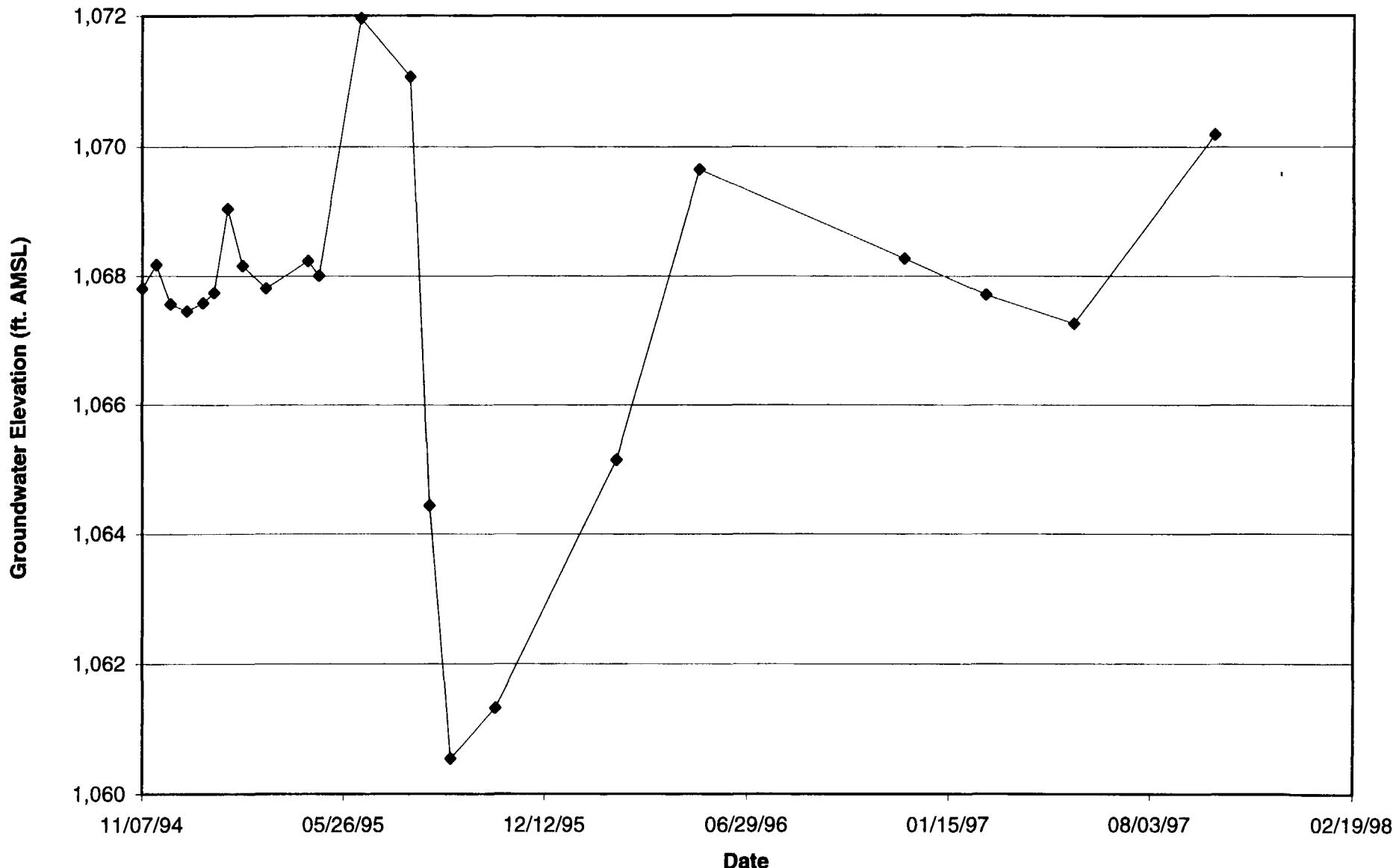


**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-302
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

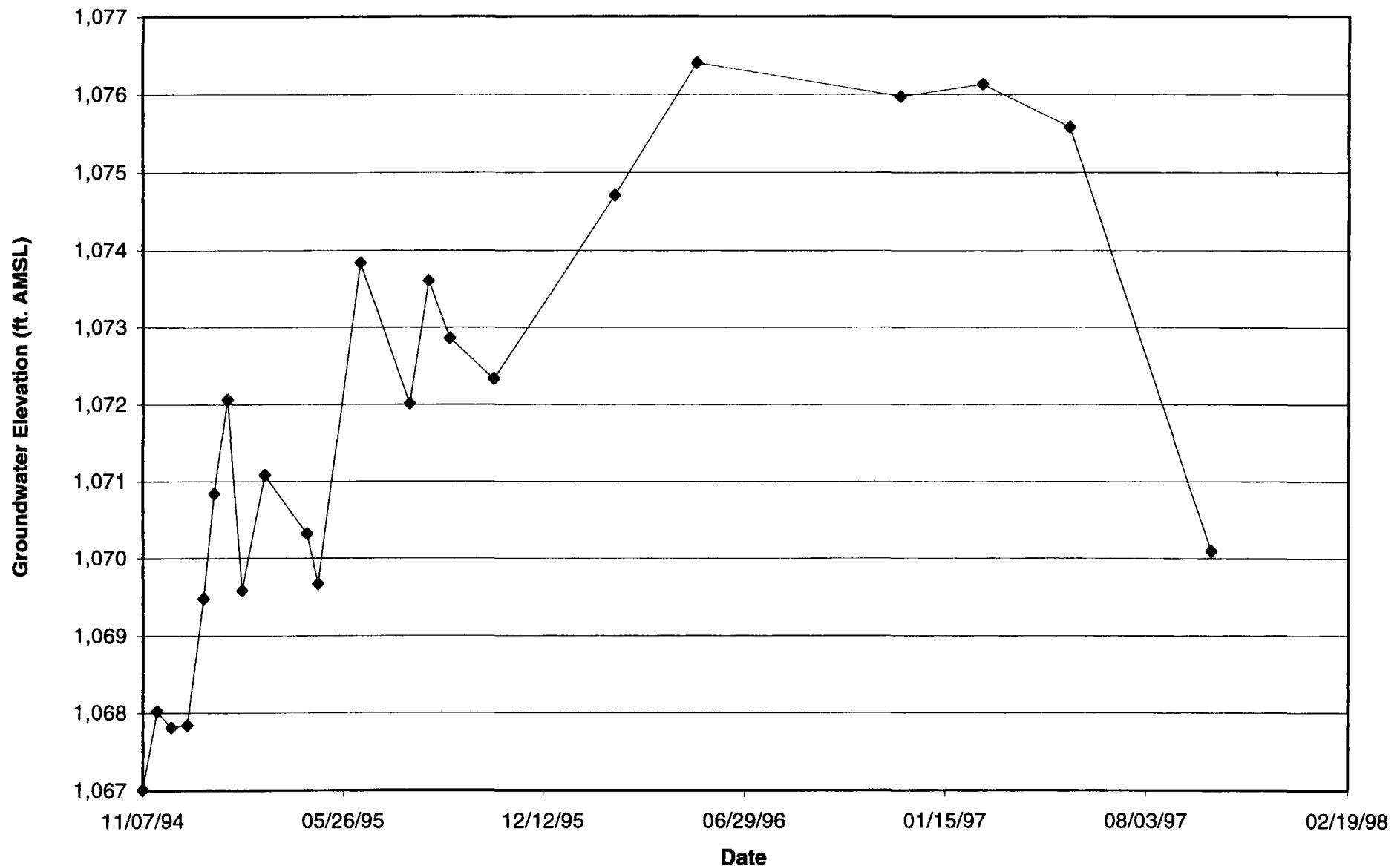


**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-303
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

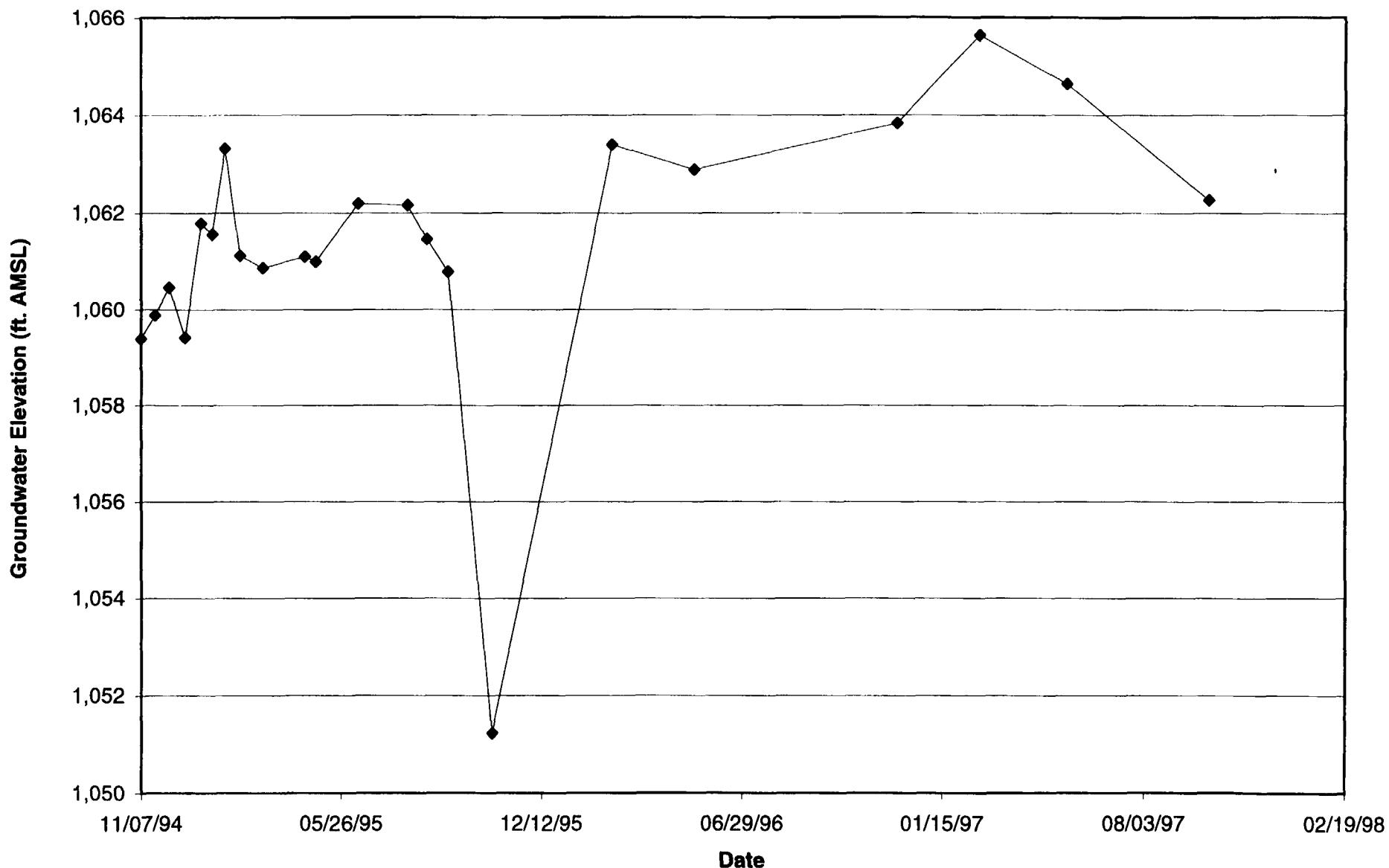


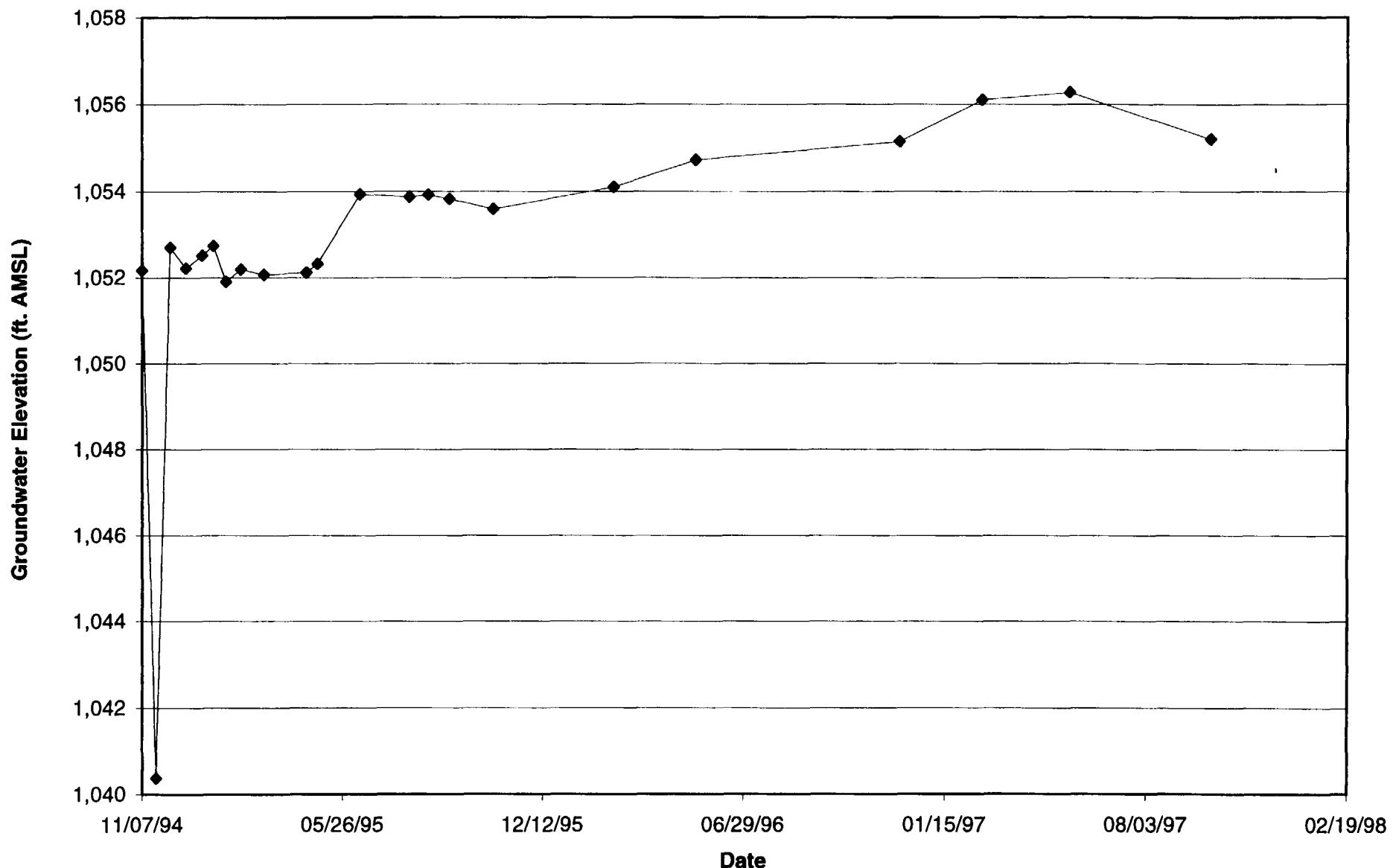


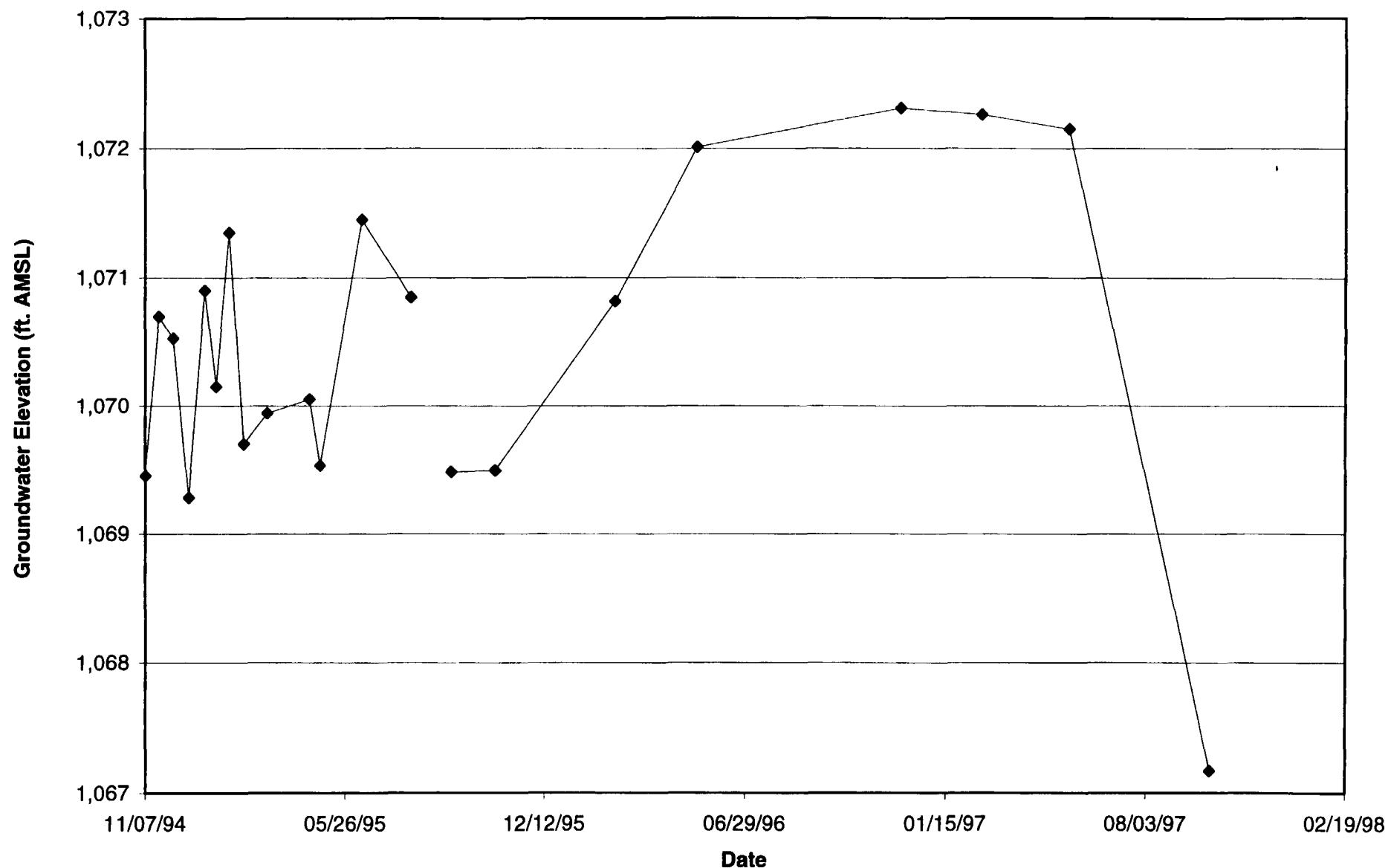
**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-306
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



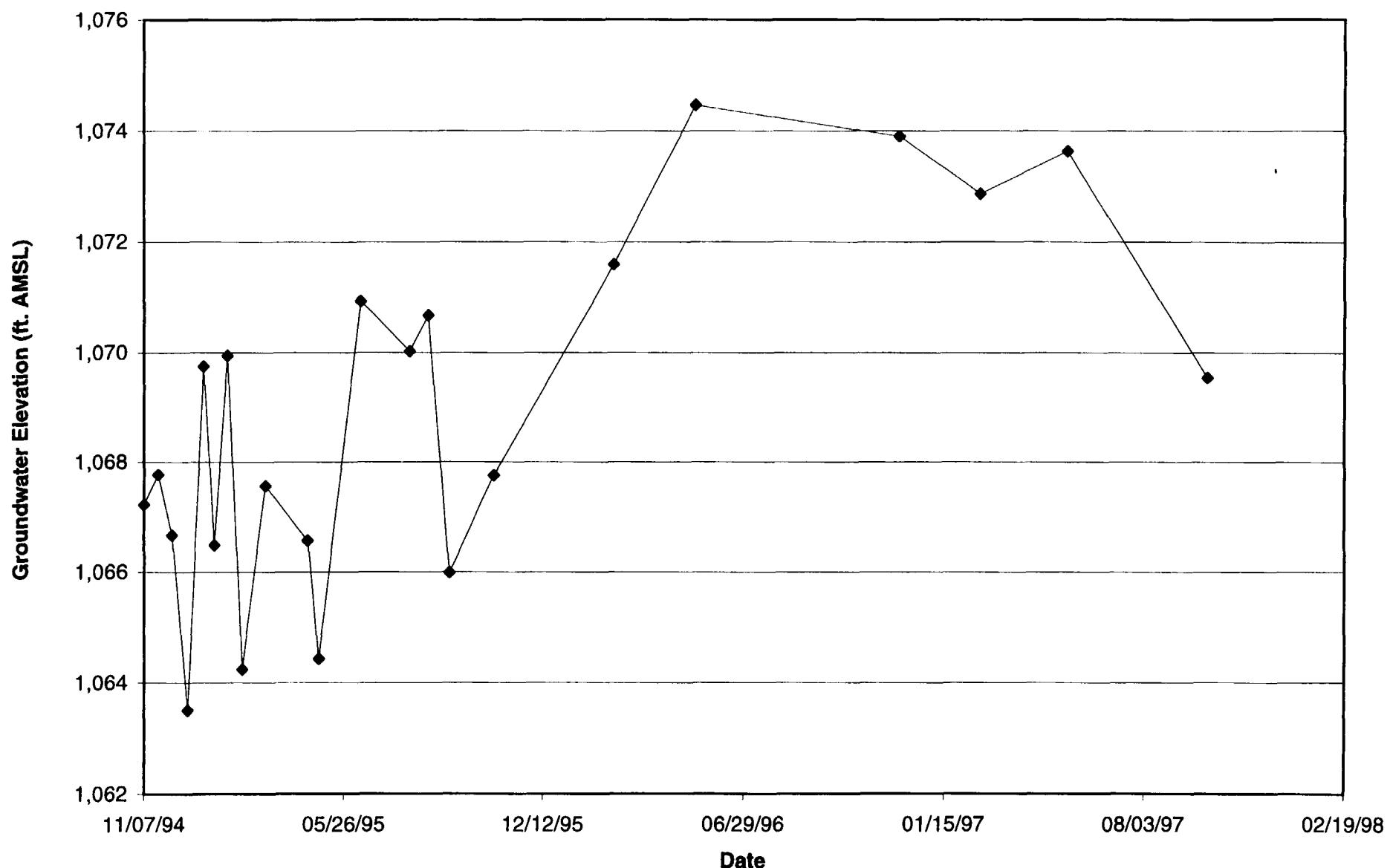
**GROUNDWATER HYDROGRAPH
LOWER INTERMEDIATE UNIT: PZ-307
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

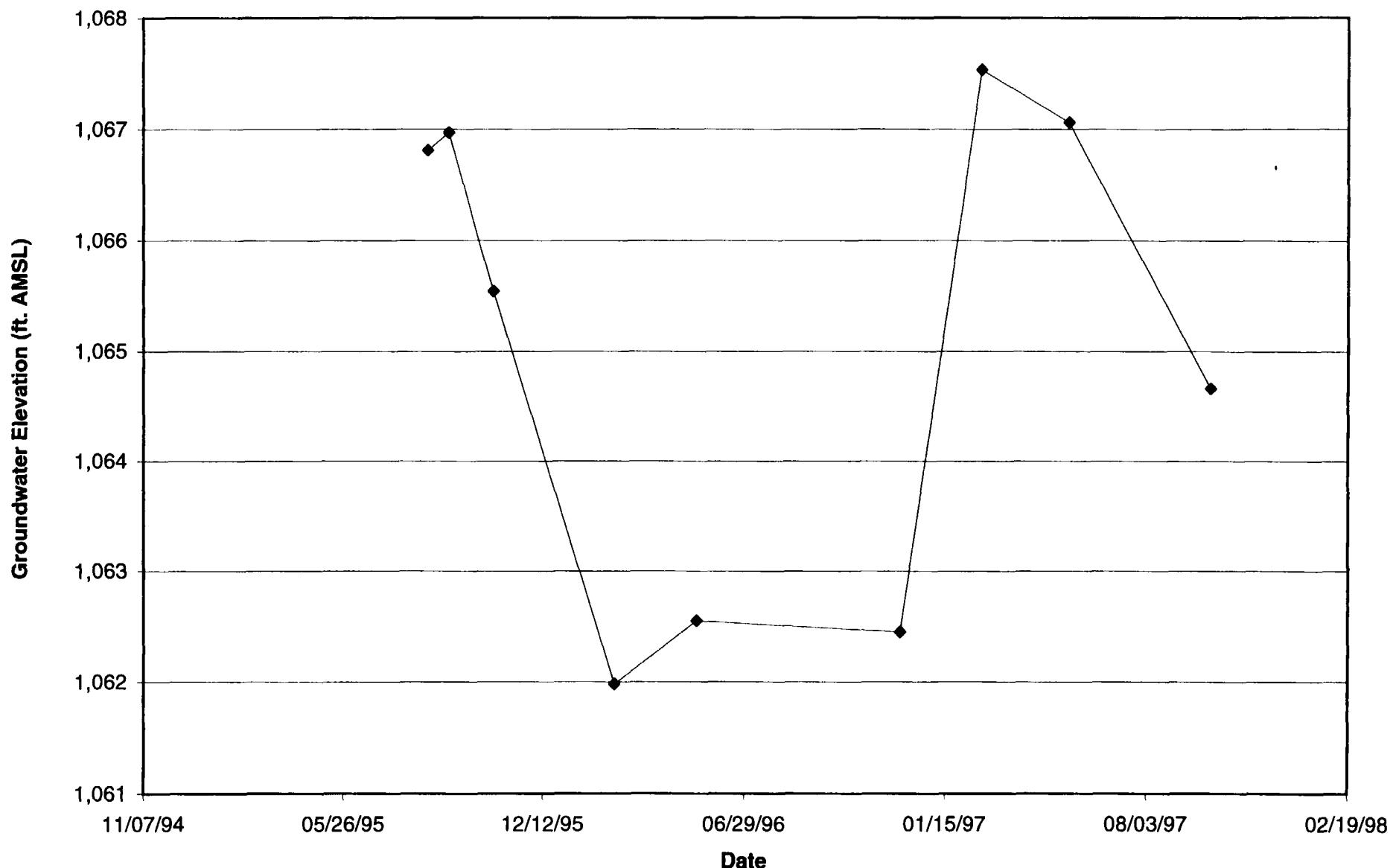




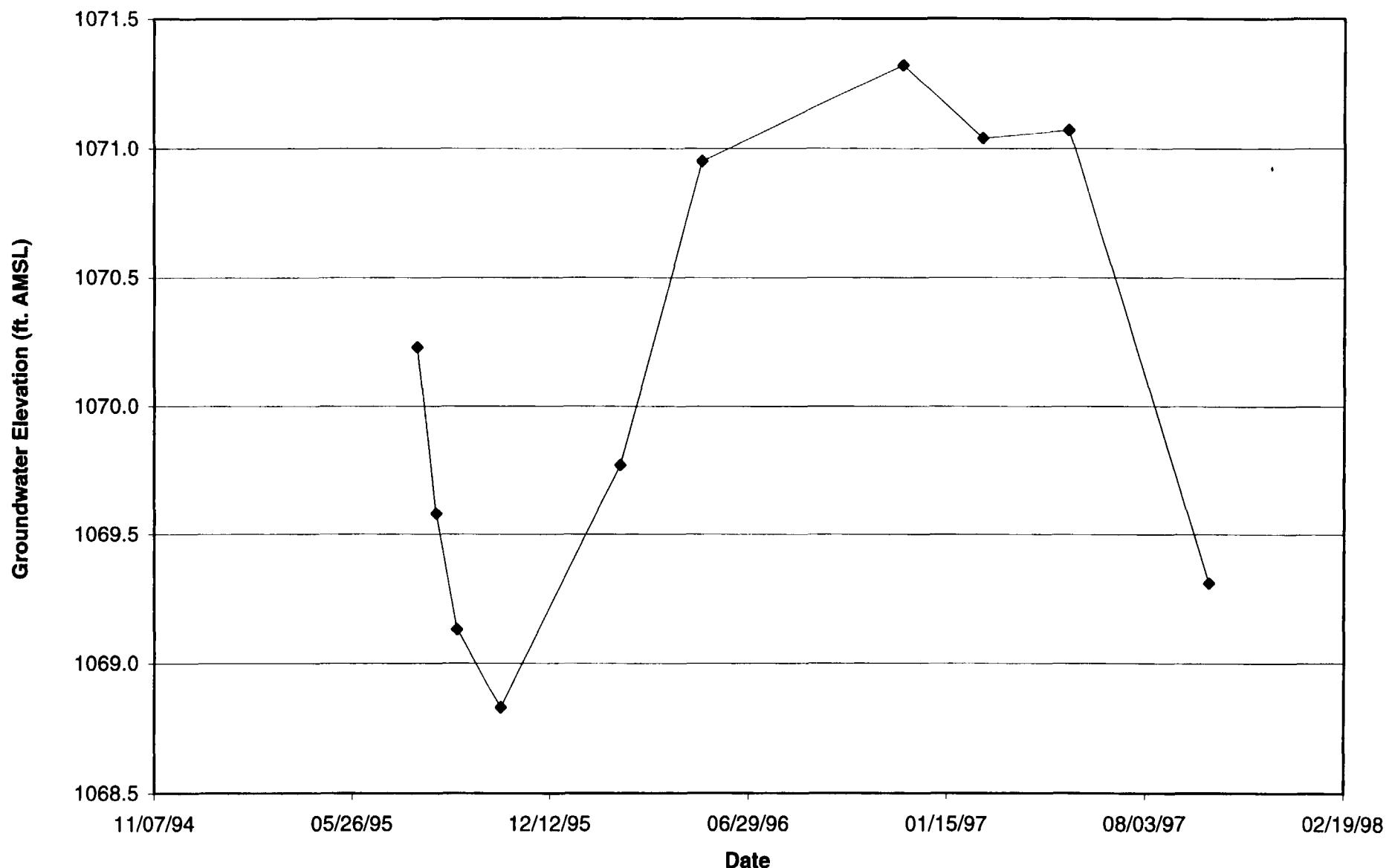


**GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-414
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

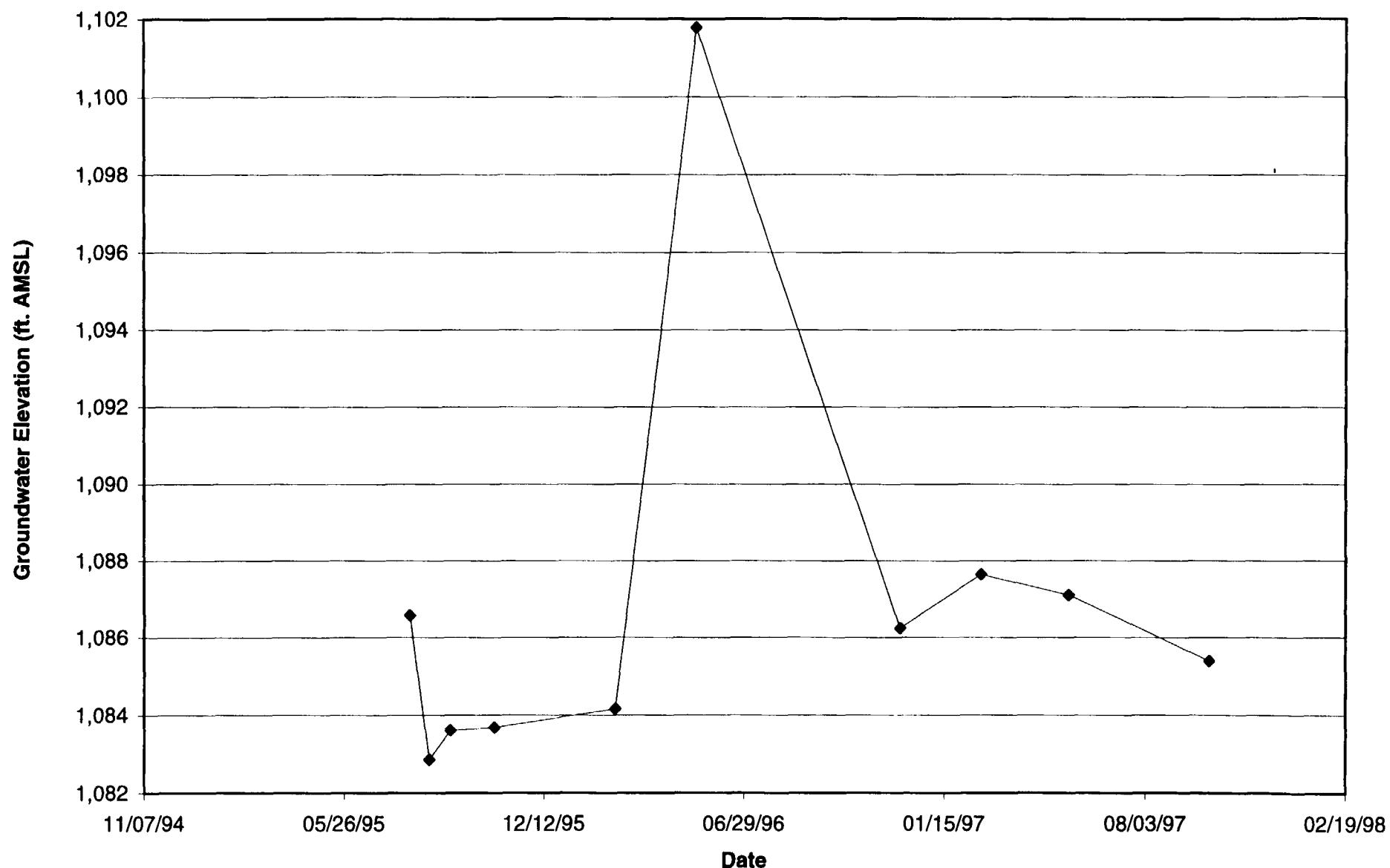




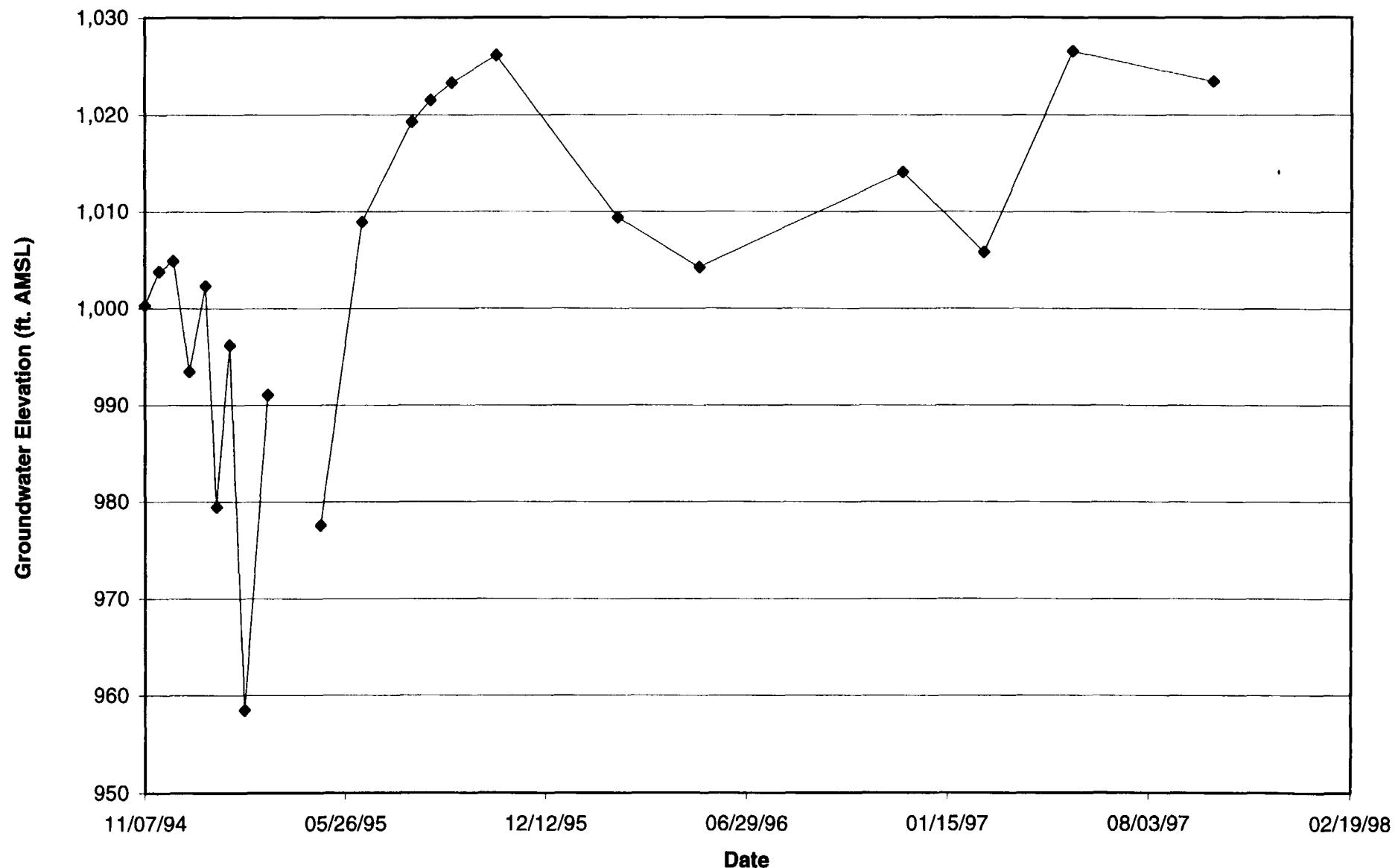
**GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-420
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**



**GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-421
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

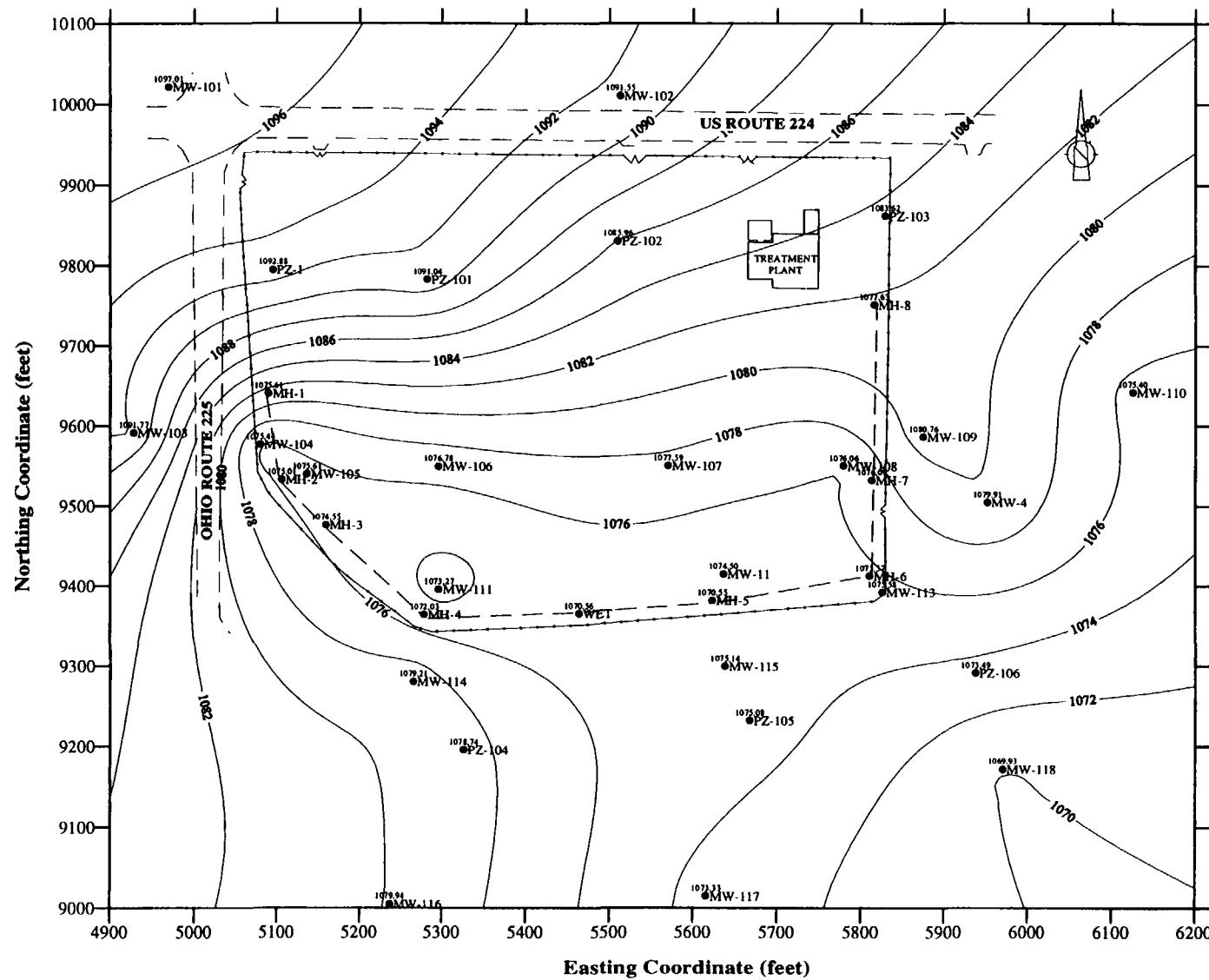


GROUNDWATER HYDROGRAPH
UPPER SHARON UNIT: MW-422
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO



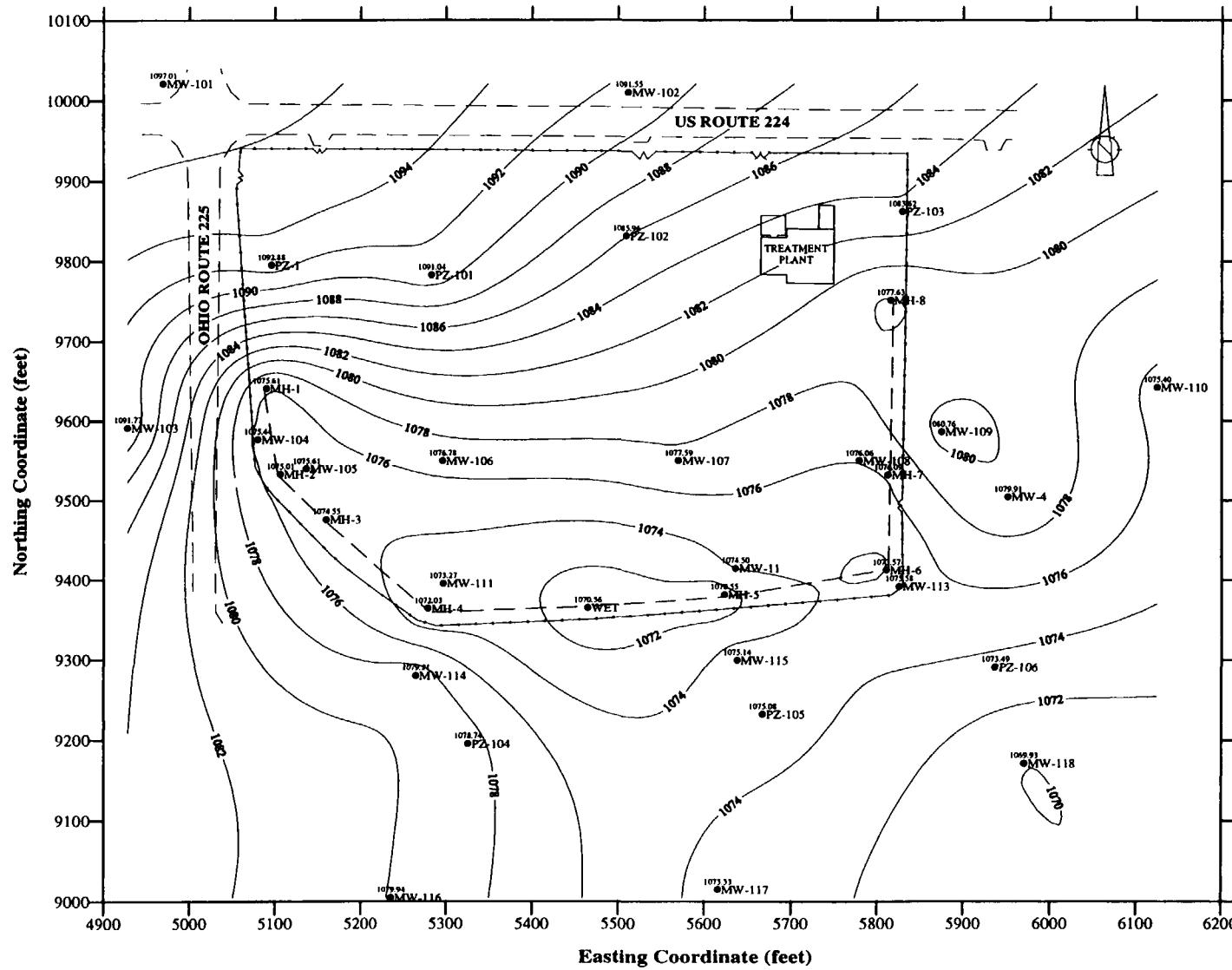
E

ATTACHMENT E
GROUNDWATER CONTOURS



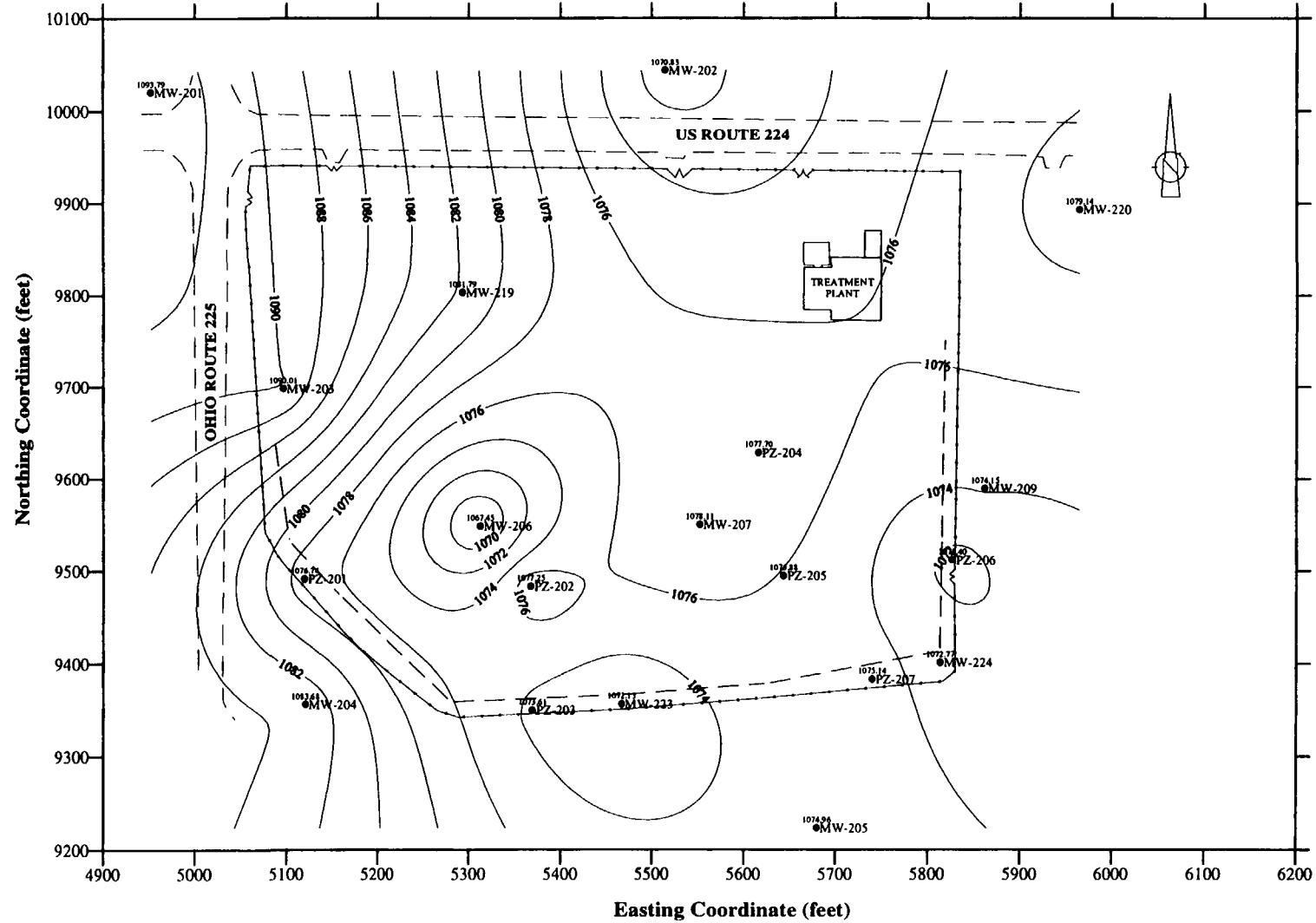
GROUNDWATER CONTOURS
WATER TABLE UNIT WITHOUT MANHOLES -- OCTOBER 6, 1997
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

CRA



GROUNDWATER CONTOURS
WATER TABLE UNIT WITH MANHOLE DATA -- OCTOBER 6, 1997
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

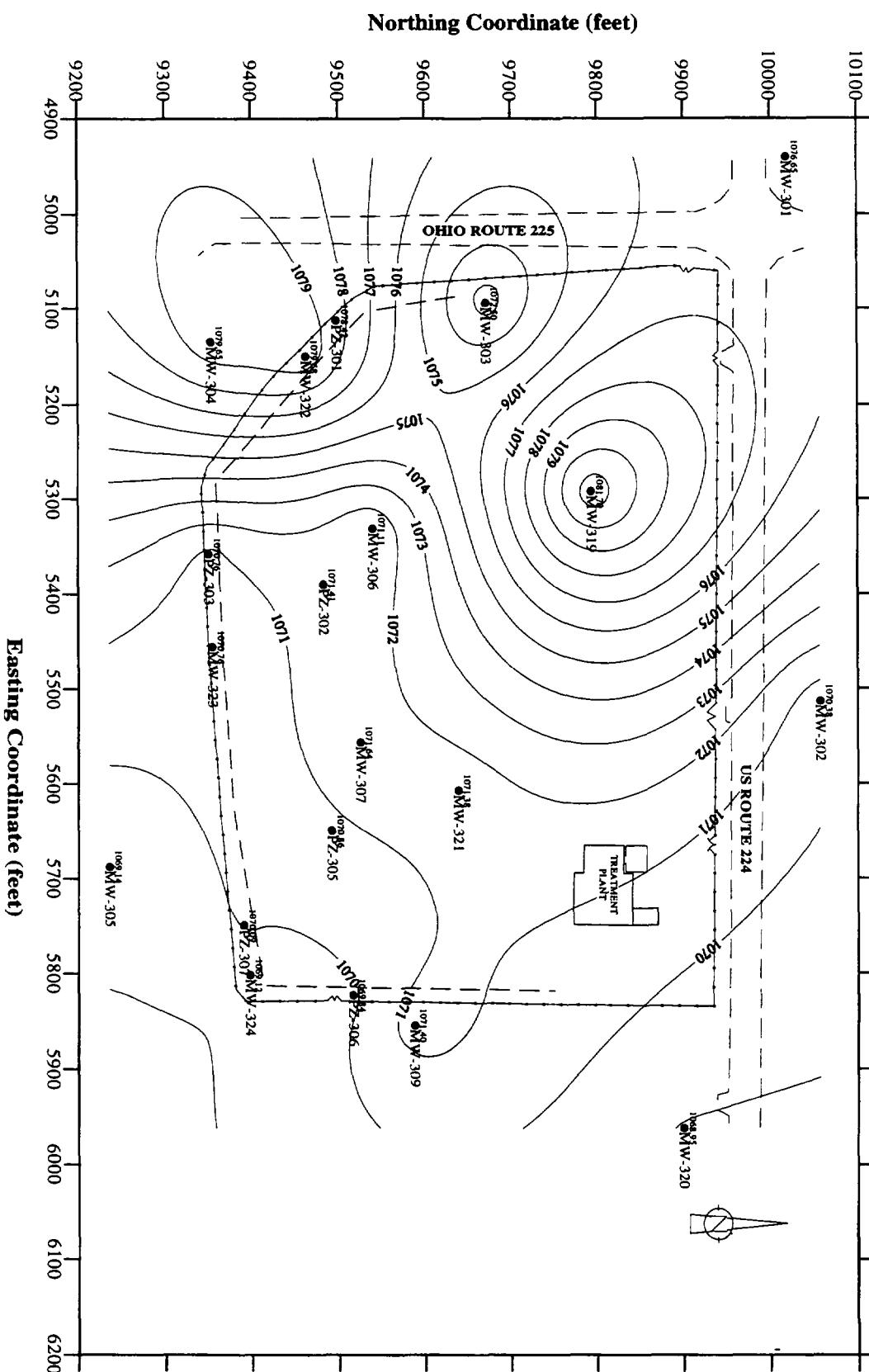
CRA



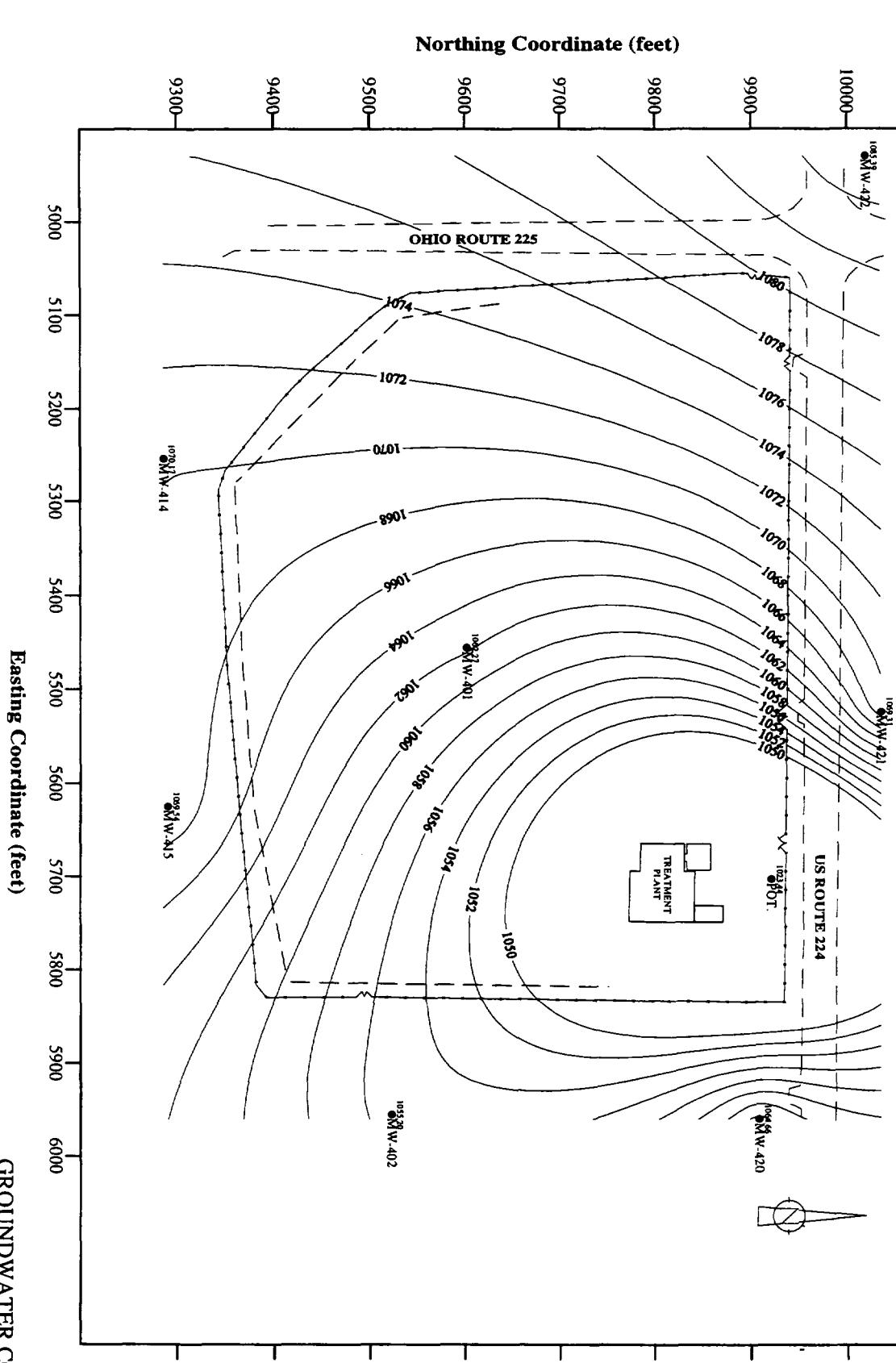
GROUNDWATER CONTOURS
UPPER INTERMEDIATE UNIT -- OCTOBER 6, 1997
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio

CRA

CRA



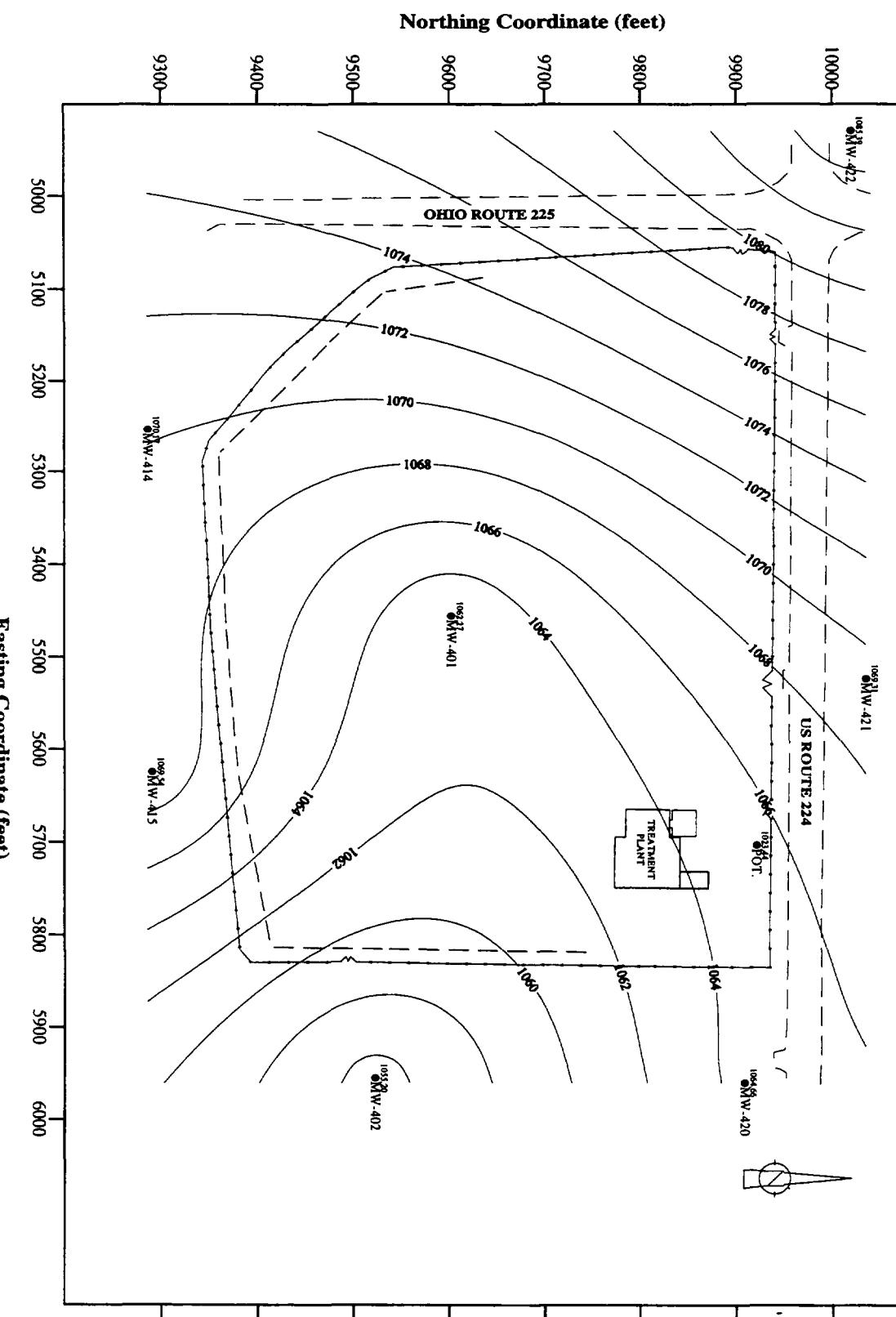
**GROUNDWATER CONTOURS
LOWER INTERMEDIATE UNIT -- OCTOBER 6, 1997
SUMMIT NATIONAL SUPERFUND SITE**



GROUNDWATER CONTOURS

Daarfield Okla

6029 (L) 11/17/97(W) REV.0 (j:\swenvr0\6029\6029-50\contours\usul\usl00697.sif)



GROUNDWATER CONTOURS
UPPER SHARON UNIT (without potable well) -- OCTOBER 6, 1997
SUMMIT NATIONAL SUPERFUND SITE

Deerfield, Ohio

CRA

SDMS US EPA REGION V
FORMAT- OVERSIZED - 5
IMAGERY INSERT FORM

The item(s) listed below are not available in SDMS. In order to view original document or document pages, contact the Superfund Records Center.

SITE NAME	Summit National		
DOC ID #	128683		
DESCRIPTION OF ITEM(S)	Water Table Unit, Upper Intermediate Unit, Upper Sharon Unit		
REASON WHY UNSCANNABLE	<input checked="" type="checkbox"/> OVERSIZED	<input type="checkbox"/> OR	<input type="checkbox"/> FORMAT
DATE OF ITEM(S)	July 1996		
NO. OF ITEMS	4		
PHASE	Remediation		
PRP	Summit National Liquid Services		
PHASE (AR DOCUMENTS ONLY)	<input type="checkbox"/> Remedial	<input type="checkbox"/> Removal	<input type="checkbox"/> Deletion Docket
	<input type="checkbox"/> Original	<input type="checkbox"/> Update #	<input type="checkbox"/> Volume _____ of _____
O.U.			
LOCATION	Box # <u>3</u>	Folder # <u>7</u>	Subsection <u>K7</u>
COMMENT(S)			